ーピリドン(5-004-02)(78 mg)のテトラヒドロフラン(2 mL)溶液を1 0 分間で滴下し、一晩室温放置した。反応液を減圧留去し、得られた結晶をジクロルメタン/エーテルで再結晶し、4 - (ベンゾオキサゾールー2 - イルオキシ) - 1 - ベンジルー3 - メトキシー5 , 6 - ジメチルー1 H - ピリジンー2 - オン(5-018)(142 mg, 89.9%) を得た。

融点:197-198℃

# 実施例U

5

15

20

1- ブチルー2- オキソー1 , 2-5 , 6 , 7 , 8- ヘキサヒドロキノリンー3- カルボン酸(4-002-01)(100 mg, 0.38 mmol)をトルエン(5 mL)に溶解し、塩化チオニル(57  $\mu$ L, 0.76 mmol)と触媒量のDMFを加え、7.5 °C で 3.0 分間攪拌した。反応液を減圧濃縮し、残渣をアセトン(5 mL)に溶解した後、アジ化ナトリウム(29 mg, 0.42 mmol)水溶液(0.5 mL)を加え室温で1.5 分間攪拌した。反応液に水(5 mL)を加え、酢酸エチル(10 mL)で抽出後、飽和食塩水(5 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。残渣をトルエン(5 mL)に溶解し、1.2 0 °C で 3.0 分間攪拌後、ベンジルアルコール(46  $\mu$ L, 0.44 mmol)を加え、さらに1.2 0 °C で 2 時間反応させた。反応液をシリカゲルクロマトグラフィー (トルエ

ン/酢酸エチル)にて精製し、 $(1-ブチル-2-オキソー1, 2-5, 6, 7, 8-\Lambda+$  サヒドロキノリン-3-イル)カルバミン酸ベンジルエステル(6-007)(90 mg, 63%)を白色泡状物質として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.96 (t, J = 7.5 Hz, 3H), 1.41 (sextet, J = 7.5 Hz, 2H), 1.63 (quint, J = 7.5 Hz, 2H), 1.70 (quint, J = 6.0 Hz, 2H), 1.83 (quint, J = 6.0 Hz, 2H), 2.53 (t, J = 6.0 Hz, 2H), 2.63 (t, J = 6.0 Hz, 2H), 4.01 (t, J = 7.8 Hz, 2H), 5.19 (s, 2H), 7.29-7.41 (m, 5H), 7.76 (s, 1H), 7.86 (brs, 1H).

5

20

- b) 3-アミノー1-ブチルー5, 6, 7, 8-テトラヒドロー1 <math>Hーキノリン -2-オン 酢酸塩(6-001-01) の合成
- 10 (1ーブチルー2ーオキソー1,2-5,6,7,8-ヘキサヒドロキノリンー3ーイル)カルバミン酸ベンジルエステル(6-007)(100 mg,0.28 mmol)をメタノール(7 mL)に溶解し、酢酸(16 μL,0.28 mmol)と10%パラジウム炭素(30 mg)を加え、水素雰囲気下1.5時間激しく攪拌した。パラジウム炭素をろ過、母液を減圧濃縮した後、結晶性残渣をヘキサンから再結晶して3ーアミノー1ーブチルー5,6,7,8ーテトラヒドロー1 Hーキノリンー2ーオン 酢酸塩(6-001-01)(60 mg,76%)を白色結晶として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.98 (t, J= 7.5 Hz, 3H), 1.43 (sextet, J= 7.5 Hz, 2H), 1.67 (quint, J= 7.5 Hz, 2H), 1.76 (quint, J= 6.0 Hz, 2H), 1.88 (quint, J= 6.0 Hz, 2H), 2.05 (s, 3H), 2.58 (t, J= 6.0 Hz, 2H), 2.67 (t, J= 6.0 Hz, 2H), 4.04 (t, J= 7.8 Hz, 2H), 8.27 (s, 1H).

c) N-(1-ブチルー2-オキソー1, 2, 5, 6, 7, 8-ヘキサヒドロキノリン<math>-3-イル) ベンズアミド(6-001)の合成

3-アミノー1-ブチルー5, 6, 7, 8-テトラヒドロー1 H-キノリンー2-オン 酢酸塩(6-001-01)(5 mg, 0.018 mmol)を塩化メチレン(1 mL)に溶解し、

25 ベンゾイルクロリド( $2.3~\mu L$ , 0.02~mmol)とトリエチルアミン( $5.6~\mu L$ , 0.04~mmol) を加え、室温で $1~0~\partial$ 間攪拌した。反応液に0.~1~N塩酸(3~mL)を加え酢酸エチル(10~mL)で抽出後、飽和食塩水(3~mL)で洗浄、無水硫酸マグネシウムで乾燥し

減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー(トルエン/酢酸エチル)にて精製し、N-(1-ブチル-2-オキソ-1,2,5,6,7,8-キサヒドロキノリン-3-イル) ベンズアミド(6-001)(4.9 mg,83%)を白色泡状物質として得た。

- <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): δ 0.99 (t, J= 7.5 Hz, 3H), 1.45 (sextet, J= 7.5 Hz, 2H), 1.66 (quint, J= 7.5 Hz, 2H), 1.74 (quint, J= 6.0 Hz, 2H), 1.87 (quint, J= 6.0 Hz, 2H), 2.60 (t, J= 6.0 Hz, 2H), 2.69 (t, J= 6.0 Hz, 2H), 4.06 (t, J= 7.8 Hz, 2H), 7.43-7.56 (m, 3H), 7.94 (d, J= 6.9 Hz, 2H), 8.31 (s, 1H), 9.26 (brs, 1H).
- d) 1-ベンジル-3-(1-ブチル-2-オキソ-1, 2, 5, 6, 7, 8-10 ヘキサヒドロキノリン-3-イル) ウレア(6-005)の合成

3-アミノー1-ブチルー5, 6, 7, 8-テトラヒドロー1 Hーキノリンー2ーオン 酢酸塩(6-001)(5 mg, 0.018 mmol)を塩化メチレン(1 mL)に溶解し、ベンジルイソシアナート(2.5  $\mu$ L, 0.02 mmol)と 4-ジメチルアミノピリジン(2.4 mg, 0.02 mmol)を加え、室温で 4 時間攪拌した。反応液に 0. 1 N塩酸(3 mL)を加え酢酸エチル(10 mL)で抽出後、飽和食塩水(3 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー(トルエン/酢酸エチル)にて精製し、ヘキサンから再結晶して1-ベンジルー3-(1-ブチルー2-オキソー1, 2, 5, 6, 7, 8-ヘキサヒドロキノリンー3-イル)ウレア(6-005)(5.0 mg, 79%)を白色結晶として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.92 (t, J= 7.5 Hz, 3H), 1.32 (sextet, J= 7.5 Hz, 2H), 1.57-1.65 (m, 2H), 1.69 (quint, J= 6.0 Hz, 2H), 1.82 (quint, J= 6.0 Hz, 2H), 2.55 (t, J= 6.0 Hz, 2H), 2.59 (t, J= 6.0 Hz, 2H), 3.90 (t, J= 7.8 Hz, 2H), 4.46 (d, J= 6.0 Hz, 2H), 5.72 (brs, 1H), 7.24-7.32 (m, 5H), 7.95 (s, 1H), 8.00 (brs, 1H).

25

15

実施例 V

a) 1-(2-ブロモフェニル)-3-(1-ブチル-5,6-ジメチル-2-オキソー1,2-ジヒドロピリジン-3-イル)ウレア(7-004)の合成

1-ベンジル-5, 6-ジメチル-4-ヒドロキシ-3-メトキシ-2-ピリドン(1-004-04) (259 mg)をD M F (3 mL)に溶解し、窒素気流中、室温攪拌下、6 0 %水素化ナトリウム(48 mg)を一時に加え入れ、1 0 分後 2 - 2

融点 154~155℃

15 ¹H NMR (300 MHz, CDCl<sub>3</sub>): δ 2.07 (s, 3H), 2.28 (s, 3H), 3.88 (s, 3H), 5.42 (brs, 2H), 7.19-7.54 (m, 9H).

# 実施例W

5

10

20 a) 3-ヒドロキシメチルー 2 (1 H) -ピリドン(7-008-01)の合成

2-ヒドロキシニコチン酸(3-067-01) (5.0 g)のトルエン(70 mL) 溶液に、室温でヘキサメチルジシラザン(HMDS, 19 mL)、及びクロロトリメチルシラン (TMSCl, 0.23 mL)を加え加熱還流した。2 時間攪拌後、溶媒を留去し、残渣にトルエン(100mL)を加えた。次に、水素化ジイソブチルアルミニウム(DIBAL, 2M トルエン溶液、90 mL)を -7 8  $^{\circ}$ C で加え 4 時間攪拌後、メタノールを加えて反応を停止し、不溶物をセライトを用いて濾過した。減圧下で濾液を留去し、残渣に水と酢酸エチルを加え有機層を分離した後、水層を酢酸エチルで 3 回抽出した。合わせた有機層を水、飽和食塩水で順次洗い、無水硫酸マグネシウムで乾燥した。溶媒を減圧下で留去し、3-ヒドロキシメチル-2 (1 H) -ピリドン(7-008-01)(2.6 g, 59%)を白色固体として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  4.50 (s, 2H), 6.43 (t, J= 6.7 Hz, 1H), 7.33-7.36 (m, 1H), 7.64-7.67 (m, 1H).

b) 1-ブチル-3-ヒドロキシメチル-2-ピリドン(7-008-02)の合成

3-ヒドロキシメチルー2 (1 H) ーピリドン(7-008-01)(0.63 g)の DMF(15 mL)溶液に、室温で炭酸カリウム(1.4 g)および1-ヨードブタン(1.86 g)を加えた。70 °Cで2時間攪拌した後、溶媒を留去した。残渣に飽和塩化アンモニウム水溶液と酢酸エチルを加え、有機層を分離した後、水層を酢酸エチルで3 回抽出した。合わせた有機相を水、飽和食塩水で順次洗い、無水硫酸マグネシウムで乾燥した。溶媒を減圧下で留去し、得られた粗生成物をカラムクロマトグラフィー(トルエン/アセトン=2/1)で精製することにより1-ブチルー3-ヒドロキシメチルー2-ピリドン(7-008-02)(0.56 g, 61%)を油状物質として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.96 (t, J = 7.3 Hz, 3H), 1.32-1.45 (m, 2H), 1.69-1.79 (m, 2H), 3.95 (t, J = 7.6 Hz, 2H), 4.57 (s, 2H), 6.20 (t, J = 6.7 Hz, 1H), 7.24 (dd, J = 6.7, 1.2 Hz, 1H), 7.28-7.31 (m, 1H).

25 c) 3-(ベンゾオキサゾール-2-イルオキシメチル)-1-ブチル-2-ピリドン(7-008-03)の合成

2-034-03 と同様にして合成した(50%)。

5

10

15

20

d) 1-ブチル-3-クロロメチル-2-ピリドン(7-008-04)の合成

 $1-ブチル-3-ヒドロキシメチル-2-ピリドン(7-008-03)(169\ mg)$ の塩化メチレン( $4.0\ mL$ )溶液に、室温で塩化チオニル( $122\ mg$ )を加えた。 1 時間攪拌した後、溶媒を留去し1-ブチル-3-クロロメチル-2-ピリドン(7-008-04)を油状物質として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.96 (t, J = 7.3 Hz, 3H), 1.32-1.45 (m, 2H), 1.69-1.79 (m, 2H), 3.96 (t, J = 7.3 Hz, 2H), 6.19 (t, J = 6.7 Hz, 1H), 7.27 (dd, J = 6.7, 2.1 Hz, 1H), 7.49 -7.53 (m, 1H).

e) 3-(ベンゾオキサゾール-2-イルスルファニルメチル)-1-ブチル-

10 2-ピリドン(7-008)の合成

2-035 と同様にして合成した(97%)。

# 実施例X

5

15 a) 3-(ベンゾオキサゾール-2-イルオキシメチル)-1-ブチル-2-ピリドン(7-009)の合成

2-035 と同様にして合成した(50%)。

# 実施例Y

20

a) 2-ブチル-8-ヒドロキシ-3-オキソ-2, 3, 5, 6, 7, 8-ヘキ サヒドロイソキノリン-4-カルボニトリル(7-013)の合成

2 ーブチルー3,8 ージオキソー2,3,5,6,7,8 ーヘキサヒドロイソキノリンー4 ーカルボニトリル(7-011)(10 mg,0.04 mmol)をTHF(1 mL)に溶解し、水素化ホウ素ナトリウム(2.1 mg,0.056 mmol)を加え、室温で10分間攪拌した。反応液に1 N塩酸(3 mL)を加え酢酸エチル(10 mL)で抽出後、飽和食塩水(5 mL)で洗浄、無水硫酸マグネシウムで乾燥し、減圧濃縮した。得られた結晶性残渣を塩化メチレンから再結晶し、2 ーブチルー8ーヒドロキシー3ーオキソー2,3,5,6,7,8 ーヘキサヒドロイソキノリンー4ーカルボニトリル(7-013)(7.4 mg,75%)を白色結晶として得た。

5

10

20

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.97 (t, J= 7.5 Hz, 3H), 1.38 (sextet, J= 7.5 Hz, 2H), 1.76 (quint, J= 7.5 Hz, 2H), 2.15 (quint, J= 6.0 Hz, 2H), 2.61 (t, J= 6.0 Hz, 2H), 3.06 (t, J= 6.0 Hz, 2H), 3.45-3.58 (m, 1H), 4.03 (t, J= 7.5 Hz, 2H), 8.39 (s, 1H).

15 b) 2-ブチル-3-チオキソ-2,3,5,6,7,8-ヘキサヒドロイソキ ノリン-4-カルボニトリル(7-014)の合成

2-ブチル-3-オキソ-2, 3, 5, 6, 7,  $8-\Lambda$ キサヒドロイソキノリンー4ーカルボニトリル(7-012)(80 mg, 0.35 mmol)をトルエン(8 mL)に溶解し、ローソン試薬(169 mg, 0.42 mmol)を加え、12時間加熱還流した。室温まで冷却後、メタノール(14 mL)を加え 1時間室温で撹拌し、反応液を減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー (トルエン/酢酸エチル)にて精製し、2-ブチル-3-チオキソ-2, 3, 5, 6, 7,  $8-\Lambda$ キサヒドロイソキノリンー4-カルボニトリル(7-014)(63 mg, 73%)を淡褐色粉末として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>8</sub>): δ 0.98 (t, *J* = 7.5 Hz, 3H), 1.41 (sextet, *J* = 7.5 Hz, 2H), 1.75-1.90 (m, 6H), 2.60 (t, *J* = 6.3 Hz, 2H), 2.87 (t, *J* = 6.3 Hz, 2H), 4.81 (t, *J* = 7.5 Hz, 2H), 7.50 (s, 1H).

ノリンー4ーカルボアルデヒド(7-015)の合成

5

10

20

2- ブチルー3- チオキソー2 、3 、5 、6 、7 、8- へキサヒドロイソキノリンー4- カルボニトリル(7-014)(220 mg、0.89 mmol)をトルエン(20 mL)に溶解し、氷冷下、水素化ジイソブチルアルミニウム(1 Mトルエン溶液、1.7 mL、1.7 mmol)を加え 30 分攪拌した。反応液に 1 N希塩酸(5 mL)を加え、酢酸エチル(10 mL)で抽出後、飽和食塩水(10 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮する。得られた残渣をシリカゲルクロマトグラフィー(トルエン/酢酸エチル)にて精製し、2- ブチルー3- チオキソー2 、3 、5 、6 、7 、8- へキサヒドロイソキノリンー4- カルボアルデヒド(7-015)(44 mg、20%)を淡褐色結晶として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>8</sub>):  $\delta$  0.99 (t, J= 7.5 Hz, 3H), 1.44 (sextet, J= 7.5 Hz, 2H), 1.74 (quint, J= 3.3 Hz, 4H), 1.87 (quint, J= 7.5 Hz, 2H), 2.62 (br t, J= 6.3 Hz, 2H), 2.95 (brt, J= 6.3 Hz, 2H), 4.51 (t, J= 7.5 Hz, 2H), 7.53 (s, 1H), 10.60 (s, 1H).

d) 2 ーブチルー 4 ーヒドロキシメチルー 5 , 6 , 7 , 8 , ーテトラヒドロー 2 H ーイソキノリンー 3 ーチオン(7-016)の合成

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): δ 0.99 (t, J = 7.2 Hz, 3H), 1.43 (sextet, J = 7.2 Hz, 2H), 1.71-1.95 (m, 6H), 2.66 (brt, J = 6.3 Hz, 2H), 2.83 (t, J = 6.3 Hz, 2H), 4.58 (brt, J = 7.2 Hz, 2H), 4.79 (s, 2H), 7.61 (s, 1H).

e) 4-(ベンゾオキサゾール-2-イルチオメチル)-2-ブチル-5,6,7,8-テトラヒドロ-2H-イソキノリン-3-チオン(7-017)の合成

2-ブチルー4-ヒドロキシメチルー5, 6, 7, 8, -テトラヒドロー2 H -イソキノリンー3-チオン(7-016)(14 mg, 0.056 mmol)を THF(1 <math>mL)に溶解し、2-メルカプトベンゾオキサゾール(16.3 mg, 0.11 mmol)、<math>1, 1, - (アゾジカルボニル) ジピペリジン(28.1 mg, 0.11 mmol)、イミダゾール<math>(7.6 mg, 0.11 mmol)、トリメチルホスフィン<math>(1 Mトルエン溶液, 0.11 mL, 0.11 mmol)をそれぞれ加え、室温で<math>1 8 時間攪拌した。反応液を減圧濃縮しトルエン(2 mL)を加え析出してくる不溶物をろ過後、母液をシリカゲルクロマトグラフィー(トルエン/酢酸エチル)で精製し、4-(ベンゾオキサゾール-2-イルチオメチル)-2-ブチル-5, 6, 7, 8-テトラヒドロ-2 H-イソキノリン-3-チオン(7-017)(6.5 mg, 30%)を淡褐色粉末として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>):  $\delta$  0.99 (t, J= 7.5 Hz, 3H), 1.43 (sextet, J= 7.5 Hz, 2H), 1.70-1.95 (m, 6H), 2.62 (t, J= 6.3 Hz, 2H), 3.01 (t, J= 6.3 Hz, 2H), 4.58 (t, J= 7.5 Hz, 2H), 5.05 (s, 2H), 7.15-7.30 (m, 2H), 7.42 (dd, J= 7.2 Hz, J= 1.8 Hz, 1H), 7.48 (brs, 1H), 7.60 (dd, J= 7.2 Hz, J= 1.8 Hz, 1H).

## 実施例Z

5

10

15

25

20 a) 2-ブチルー3-オキソー1, 2, 3, 4, 5, 6, 7, 8-オクタヒドロイソキノリンー4-カルボニトリル(7-018)の合成

2-ブチル-3-オキソ-2, 3, 5, 6, 7,  $8-\Lambda$ キサヒドロイソキノリンー4-カルボニトリル(7-012)(100 mg, 0.43 mmol)をトルエン(10 mL)に溶解し、氷冷下、水素化ジイソブチルアルミニウム(1 Mトルエン溶液, 0.8 mL, 0.8 mmol)を加え 1 0 分間攪拌した。反応液に 1 N 塩酸(5 mL)を加え酢酸エチル(10

mL)で抽出後、飽和食塩水(5 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー (トルエン/酢酸エチル)にて精製し、2-ブチル-3-オキソ-1, 2, 3, 4, 5, 6, 7, 8-オクタヒドロイソキノリン-4-カルボニトリル(7-018)(70 mg, 70%)を白色粉末として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>8</sub>):  $\delta$  0.93 (t, J= 7.5 Hz, 3H), 1.32 (sextet, J= 7.5 Hz, 2H), 1.42-1.59 (m, 5H), 1.88 (s, 1H), 1.97-2.08 (m, 2H), 2.20-2.32 (m, 1H), 2.54-2.66 (m, 1H), 3.06-3.19 (m, 2H), 3.33-3.43 (m, 3H).

5

10 上記実施例と同様にして、以下の表に示される化合物を合成した。なお、表中 の左カラムの数字は化合物 No. を表わす。

表 1

	1	
	構造式	物性値
I-1	S N N	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> ) 1.13 (6H, s), 1.20 (6H, d, J = 6.9), 1.25 (3H, t, J = 7.4), 2.61 (2H, s),3.05 (2H,s), 3.17 (1H, m), 3.64 (2H, q, J = 6.9), 6.72-6.80 (1H, m), 6.98-7.07 (2H, m), 7.20-7.32 (1H, m).
I-2	S N N N N N N N N N N N N N N N N N N N	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> )1.14 (6H, s), 1.20 (6H, d, J = 6.9), 1.22 (3H, t, J = 7.4), 2.60 (2H, s), 2.95 (2H, q, J = 7.4), 2.96 (1H, q, J = 6.9), 3.73 (2H, s), 6.73-6.78 (1H, m), 7.10-7.17 (2H, m), 7.25-7.32 (1H, m).
I-3	S N N N	<sup>1</sup> H-NMR ( $\delta$ ppm TMS / CDCl <sub>3</sub> ) 1.16 (6H, s), 1.21 (6H, d, J = 6.9), 1.36 (3H, t, J = 7.1), 2.59 (2H, s), 3.17 (1H, q, J = 6.9), 3.65 (2H, s), 4.32 (2H, q, J = 7.1), 6.74-6.78 (1H,m), 7.12-7.16 (2H, m), 7.30-7.36 (1H, m).
I-4		<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> )1.16 (6H, s), 1.21 (6H, d, J = 6.9), 1.36 (3H, t, J = 7.1), 2.63 (2H, s), 2.89 (2H, q, J = 7.1), 3.15 (1H, q, J = 6.9), 3.77 (2H, s), 6.79-6.85 (1H,m),7.12-7.16 (2H, m), 7.30-7.36 (1H, m).
I-5	S N S	<sup>1</sup> H-NMR (ô ppm TMS / CDCl <sub>3</sub> )1.20 (6H, d, J = 6.9), 1.23 (6H, s), 2.65 (3H, s), 2.68 (2H, s), 3.11 (1H, q, J = 6.9), 4.51 (2H, s), 6.83-6.90 (1H, m), 7.11-7.18 (2H, m), 7.28-7.35 (1H, m).
I-6	S N S N	<sup>1</sup> H-NMR ( $\delta$ ppm TMS / CDCl <sub>3</sub> ) 1.20 (6H, d, J = 6.9), 1.30 (3H, t, J = 7.4), 2.90 (2H, t, J = 7.4), 3.15 (2H, t, J = 7.4), 3.20 (1H, q, J = 6.9), 4.31 (2H, t, J = 7.4), 6.79-6.82 (1H, m), 7.07-7.16 (2H, m), 7.28-7.32 (1H, m).
I-7	S N S	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> ) 1.23 (6H, d, J = 6.9), 2.65 (3H, s), 2.90 (2H, t, J = 7.4), 3.20 (1H, q, J = 6.9), 4.45 (2H, t, J = 7.4), 6.79-6.82 (1H, m), 7.07-7.16 (2H, m), 7.28-7.32 (1H, m).

表 2

	構造式	物性値
I-8	OMe N N SEt	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> ) 1.15 (6H, s), 1.25 (3H, t, J = 7.4), 2.69 (2H, s), 2.83 (2H, q, J = 7.4), 3.69 (2H, s), 3.84 (3H, s), 4.61 (2H, s), 6.86 (1H, d, J = 8.2), 6.96 (1H, t, J = 8.2), 7.26 (1H, t, J = 8.2), 7.55 (1H, t, J = 8.2).
I-9	OMe N N S SMe	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> ) 1.25 (6H, s), 2.56 (3H, s), 2.72 (2H, s), 3.85 (3H, s), 4.43 (2H, s), 4.63 (2H, s), 6.86-6.88(2H, m), 7.20-7.30 (1H, m), 7.44-7.48 (1H, m).
I-10	OMe SEt	<sup>1</sup> H-NMR (ô ppm TMS / CDCl <sub>3</sub> ) 1.11 (6H, s), 1.26 (3H, t, J = 7.4), 2.61 (2H, s), 2.83 (2H, q, J = 7.4), 2.99-3.05 (2H, m), 3.61-3.66 (2H, m), 3.62 (2H, s), 3.82 (3H, s), 6.86-6.91 2H, m), 7.17-7.26 (2H, m).
I-11	OMe S SMe	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> ) 1.19 (6H, s), 2.55 (3H,s), 2.64 (2H, s), 3.05 (2H, t, J = 7.5), 3.66 (2H, t, J = 7.5), 3.84 (3H, s), 4.35 (2H, s), 6.84-6.91 (2H, m), 7.17-7.30 (2H, m).
I-12	F <sub>3</sub> CO-N-SMe	<sup>1</sup> H-NMR (δ ppm TMS / CDCl <sub>3</sub> ) 1.35- 1.67 (8H, m), 1.74-1.86 (2H, m), 2.64 (3H, s), 2.68 (2H, s), 4.56 (2H, s), 7.02-7.07 (2H, m), 7.22 (2H, d, J=8.2 Hz).

表 3

	R <sup>1</sup>	R <sup>2</sup>	R³	R⁴	R⁵	R <sup>6</sup>	R <sup>7</sup>	R <sup>a</sup>
I-16	Н	Н	Н	Н	Н	COSEt	Me	Ме
I-17	, F	Н	Н	Н	Н	COSEt	Me	Ме
I-18	C7	Н	Н	Н	Н	COSEt	Me	Me
I-19	Me	Н	Н	Н	Н	COSEt	Me	Me
I-20	Et	Н	Н	Н	Н	COSEt	Me	Me
I-21	Pr	Н	Н	Н	Н	COSEt	Me	Me
I-22	Bu	Н	Н	Н	Н	COSEt	Me	Me
I-23	Bus	Н	Н	Н	Н	COSEt	Me	Me
I-24	Bu <sup>t</sup>	Н	Н	Н	Н	COSEt	Me	Me
I-25	Ph	Н	Н	Н	Н	COSEt	Me	Me
I-26	CF <sub>3</sub>	Н	Н	Н	Н	COSEt	Me	Me
I-27	0Me	Н	Н	Н	Н	COSEt	Me	Me
I-28	OEt	Н	Н	Н	Н	COSEt	Me	Me
I-29	OPr'	Н	Н	Н	Н	COSEt	Me	Me
I-30	SMe	Н	Н	Н	Н	COSEt	Me	Ме
I-31	SEt	H	Н	Н	Н	COSEt	Me	Ме
I-32	SPr′	Н	Н	Н	Н	COSEt	Me	Ме
I-33	NMe <sub>2</sub>	Н	Н	Н	Н	COSEt	Me	Ме
I-34	Н	Pr'	Н	Н	Н	COSEt	Me	Ме
I-35	Н	Н	C1	Н	Н	COSEt	Me	Me
I-36	Н	Н	Pr'	Н	Н	COSEt	Ме	Ме
I-37	Н	Н	NO <sub>2</sub>	Н	Н	COSEt	Me	Me
I-38	Ме	Me	Н	Н	Н	COSEt	Me	Ме
I-39	Ме	Н	Me	Н	Н	COSEt	Me	Me
I-40	Me	Н	Н	Me	Н	COSEt	Me	Me
I-41	Ме	Н	Н	Н	Me	COSEt	Me	Me
I-42	Н	Me	Me	Н	Н	COSEt	Me	Me
I-43	Н	Me.	Н	Me	Н	COSEt	Me	Me
I-44	Me	Н	C1	Н	Н	COSEt	Me	Me

表 4

	R¹	R <sup>2</sup>	R³	R⁴	R⁵	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-45	C1	Н	Me	Н	Н	COSEt	Me	Me
I-46	Pr'	Н	NO <sub>2</sub>	Н	Н	COSEt	Ме	Me
I-47	Pr'	Н	Н	Н	NO <sub>2</sub>	COSEt	Me	Me
I-48	NO <sub>2</sub>	Н	NO <sub>2</sub>	Н	Н	COSEt	Me	Me
I-49	Pr	Н	Н	Н	Н	COSMe	Me	Ме
I-50	Pr'	Н	Н	H	Н	COSMe	Me	Me
I-51	Bu <sup>s</sup>	Н	Н	Н	Н	COSMe	Me	Me
I-52	Н	Pr'	Н	Н	H	COSMe	Ме	Ме
I-53	Н	OMe	OMe	Н	Н	COSMe	Me	Me
I-54	Н	-0	CH₂O-	Н	Н	COSMe	Me	Me
I-55	Н	ОМе	0Me	0Me	Н	COSMe	Ме	Ме
I-56	Et	Н	Н	Н	Н	CSSMe	Ме	Me
I-57	Bu⁵	Н	Н	Н	. Н	CSSMe	Me	Me
I-58	CH₂OMe	Н	Н	Н	Н	CSSMe	Me	Me
I-59	CH(Me)OMe	Н	Н	Н	Н	CSSMe	Ме	Me
I-60	OMe	Н	Н	Н	Н	CSSMe	Me	Me
I-61	0Et	Н	Н	Н	Н	CSSMe	Me	Me
I-62	SMe	Н	Н	Н	Н	CSSMe	Me	Me
I-63	SEt	Н	Н	Н	Н	CSSMe	Me	Me
I-64	SPr'	Н	Н	Н	Н	CSSMe	Ме	Me
I-65	SOMe	Н	Н	Н	Н	CSSMe	Ме	Me
I-66	S0₂Me	Н	Н	Н	Н	CSSMe	Ме	Me
I-67	SOEt	Н	Н	Н	Н	CSSMe	Me	Me
I-68	NMe <sub>2</sub>	Н	Н	Н	Н	CSSMe	Me	Me
I-69	Н	Pr'	Н	- Н	Н	CSSMe	Me	Ме
I-70	Н	Н	C1	Н	Н	CSSMe	Me	Me

表 5

	<del></del>							
	R¹	R <sup>2</sup>	R³	R⁴	R⁵	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-71	Me	Н	Me	Н	Н	CSSMe	Me	Me
I-72	Me	Н	Н	Ме	Н	CSSMe	Me	Me
I-73	Me	Н	Н	Н	Me	CSSMe	Me	Me
I-74	Н	Me	Me	Н	Н	CSSMe	Me	Ме
I-75	Н	Me	Н	Me	Н	CSSMe	Me	Ме
I-76	OMe	OMe	Н	Н	Н	CSSMe	Me	Me
I-77	Н	OMe	OMe	Н	Н	CSSMe	Me	Me
I-78	OMe	Н	Н	OMe	Н	CSSMe	Me	Me
I-79	OMe	Н	0Me		Н	CSSMe	Me	Me
I-80	Н	-OC	H₂O−	Н	Н	CSSMe	Me	Me
I-81	Pr'	Н	NO <sub>2</sub>	Н	Н	CSSMe	Me	Me
I-82	Pr'	Н	Н	Н	NO <sub>2</sub>	CSSMe	Me	Me
I-83	Н	OMe	0Me	OMe	Н	CSSMe	Ме	Ме
I-84	Pr'	Н	Н	Н	Н	CSSEt	Me	Me
I-85	Bus	Н	Н	Н	Н.	CSSEt	Me	Me
I-86	0Et	Н	Н	Н	Н	CSSEt	Me	Me
I-87	SMe	Н	Н	Н	Н	CSSEt	Me	Me
I-88	Н	Pr'	Н	Н	Н	CSSEt	Me	Me
I-118	Н	0Et	OEt	Н	Н	CSSMe	Me	Me
I-119	0Me	Н	Me	Н	Н	CSSMe	Me	Me
I-120	0Me	Н	Н	Me	H	CSSMe	Me	Me
I-121	Н	0Me	Me	Н	Н	CSSMe	Me	Ме
I-122	Me	Me	Н	Н	Н	CSSMe	Mé	Me
I-123	N(Me)Ac	Н	Н	Н	Н	CSSMe	Me	Me

表 6

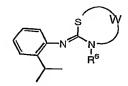
$$\begin{array}{c} \begin{array}{c} R^7 \\ \\ \\ \\ \end{array} \\ \begin{array}{c} R^6 \end{array}$$

	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-89	COPr	Me	Me
I-90	COOMe	Me	Me
I-91	COOPr	Me	Me
I-92	CONHEt	Me	Me
I-93	COCH <sub>2</sub> OMe	Me	Me
I-94	COCH <sub>2</sub> SMe	Me	Me
I-95	COCH <sub>2</sub> SEt	Me	Ме
I-96	CS0Et	Me	Me
I-97	CSNHEt	Ме	Me
I-98	CSSPr	Ме	Me
I-99	CSSPr'	Me	Me
I-100	CSSBn	Me	Me

表 7

	R <sup>1</sup>	R <sup>2</sup>	R³	· n	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-101	Н	Н	C1	1	COSEt	Me	Me
I-102	Н	Н	C1	1	CSSMe	Me	Me
I-103	C1	Н	C1	2	COSEt	Me	Me
I-104	C1	Н	C7	2	CSSMe	Me	Me

表 8



-			
		R <sup>6</sup>	W
	-105	COSEt	s
	-106	COSEt	s N
	-107	COSEt	s N
	-108	COSEt	s
	109	COSEt	s
	110	COSEt	s N
	111	COSEt	s
	112	COSEt	s
	113	CSSMe	s N
I-1		CSSMe	s N
I-1		CSSMe	s
I-1		CSSMe	s
I-1	17	CSSMe	s

表 9

	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R⁴	R⁵	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-124	Н	Н	OEt	H	Н	CSSMe	Me	Ме
I-125	H	OEt	Н	Н	Н	CSSMe	Me	Me
I-126	Н	Н	OMe	Н	Н	CSSMe	Me	Ме
I-127	Н	OMe	H	H	Н	CSSMe	Me	Me
I-128	Н	OEt	OMe	H	Н	CSSMe	Me	Me
I-129	Н	OPr	OMe	H	Н	CSSMe	Me	Ме
I-130	Н	OEt	OEt	H	Н	CSSMe	Me	Ме
I-131	Н	Н	OPr	Н	Н	CSSMe	Me	Ме
I-132	Н	OPr	Н	Н	Н	CSSMe	Ме	Ме
I-133	H	Н	OBu	Н	I	CSSMe	Ме	Ме
I-134	Н	OBu	Н	Н	Η	CSSMe	Ме	Ме
I-135	Н	OMe	OEt	Н	Τ	CSSMe	Ме	Ме
I-136	Н	OMe	OPr	Ι	Ι	CSSMe	Ме	Ме
I-137	Н	OBu	ОМе	H	Н	CSSMe	Me	Ме
I-138	Н	Н	OPr <sup>i</sup>	H	Н	CSSMe	Me	Me
I-139	H	OPr <sup>i</sup>	Н	H	Н	CSSMe	Me	Ме
I-140	H	H	H	Н	Н	CSSMe	Me	Me
I-141	F	Н	Н	Н	. H	CSSMe	Me	Me
I-142	C	Н	H	Н	Н	CSSMe	Me	Me
I-143	H	CI	Н	Н	Н	CSSMe	Ме	Ме
I-144	Me	Н	H	Н	Н	CSSMe	Ме	Ме
I-145	H	Me	Н	H	H	CSSMe	Me	Ме
I-146	Н	H	Me	Н	Н	CSSMe	Ме	Ме
I-147	H	Bu	Н	H	Н	CSSMe	Me	Me
I-148	Н	Н	Bu	Н	H	CSSMe	Me	Ме

表 1 0

	R¹	R <sup>2</sup>	R <sup>3</sup>	R⁴	R⁵	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-149	Bu <sup>t</sup>	Н	Н	H	Н	CSSMe	Me	Ме
I-150	Н	H	Et	Н	Н	CSSMe	Me	Ме
I-151	Н	Et	Н	Н	Н	CSSMe	Me	Me
I-152	Н	Н	F	Н	Н	CSSMe	Me	Ме
I-153	Н	F	H	H	Н	CSSMe	Me	Me
I-154	Н	Н	Pr <sup>i</sup>	Н	Н	CSSMe	Me	Me
I-155	Н	н	Morpho lino	Н	Н	CSSMe	Ме	Ме
I-156	Н	Ac	Н	Н	Н	CSSMe	Me	Me
I-157	Н	Н	Br	Н	Н	CSSMe	Me	Ме
I-158	Н	Br	Н	Н	H	CSSMe	Me	Me
I-159	Br	Н	Н	Н	Н	CSSMe	Me	Ме
I-160	Н	C(Me)= NOMe	Н	Н	Н	CSSMe	Ме	Ме
I-161	H	Н	Ac	H	Н	CSSMe	Me	Ме
I-162	Н	Н	C(Me)= NOMe	Н	Н	CSSMe	Ме	Ме
I-163	OPr <sup>i</sup>	Н	T	Τ	Н	CSSMe	Ме	Me
I-164	Pr	T	Η	Ι	Н	CSSMe	Ме	Me
I-165	CF₃	H	Н	Τ	Η	CSSMe	Ме	Ме
I-166	Τ	Н	OPh	Н	Η	CSSMe	Me	Ме
I-167	Ή	Н	Pr	Н	I	CSSMe	Me	Ме
I-168	Н	Н	Bu <sup>t</sup>	Н	Ξ	CSSMe	Me	Ме
I-169	Н	CF₃	Н	Н	Н	CSSMe	Me	Ме
I-170	Н	Н	CF₃	H	Н	CSSMe	Me	Me
I-171	Pr <sup>i</sup>	Н	NHAc	Н	Н	CSSMe	Me	Me
I-172	Pr <sup>i</sup>	H	Н	Н	NHAc	CSSMe	Ме	Me
I-173	Н	COOMe	H	Н	OMe	CSSMe	Ме	Me

表 1 1

	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R⁵	R <sup>6</sup>	l R <sup>7</sup>	R <sup>8</sup>
I-174	Morpholino	Н	Н	Н	Н	CSSMe	Ме	Me
I-175	Н	Morpholino	Н	Н	Н	CSSMe	Ме	Ме
I-176	Pr <sup>i</sup>	Н	Н	COOEt	Н	CSSMe	Ме	Ме
I-177	Н	Н	Piperid ino	Н	Н	CSSMe	Ме	Ме
I-178	Pyrrolidino	Н	Н	Н	Η	CSSMe	Me	Me
I-179	H	SMe	Н	Н	Τ	CSSMe	Ме	Me
I-180	Н	Н	SMe	Н	Н	CSSMe	Me	Ме
I-181	OCF <sub>3</sub>	Н	Н	Н	Н	CSSMe	Ме	Ме
I-182	Н	OCF <sub>3</sub>	Н	Н	Н	CSSMe	Ме	Ме
I-183	Н	Н	OCF₃	Н	Н	CSSMe	Me	Ме
I-184	Н	Н	3- Pyridyl	Н	Н	CSSMe	Me	Ме
I-185	H	3-Pyridyl	H	Н	Н	CSSMe	Ме	Ме
I-186	3-Pyridyl	Η	Η	Н	Н	CSSMe	Ме	Me
I-187	OPh	Н	Н	Н	Н	CSSMe	Ме	Ме
I-188	H	OEt	OEt	H	Н	COOMe	Ме	Ме
I-189	OMe	Н	Н	Н	Н	COOMe	Ме	Ме
I-190	Н	Н	Et	H	Н	COOMe	Ме	Me
I-191	Н	H	Pr <sup>i</sup>	H	Н	COOMe	Ме	Ме
I-192	OMe	H	Н	Н	H	COSMe	Me	Ме
I-193	Н	Н	Et	Н	Н	COSMe	Ме	Me
I-194	<u> </u>	H	Pr <sup>i</sup>	Н	Н	COSMe	Me	Ме
I-195	Н	H	OEt	Н	Н	COSMe	Me	Ме
I-196	H	OMe	OEt	Н	Н	COSMe	Ме	Ме
I-197	Н	Piperidino	H	Н	Н	CSSMe	Ме	Ме
I-198	Н	<u> </u>	NEt <sub>2</sub>	Н	Н	CSSMe	Ме	Ме

表 1 2

	R <sup>†</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R⁵	∏R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-199	OMe	Н	COOMe	Н	T H	CSSMe	Me	Ме
I-200	Н	2- Oxopyrr olidino	Н	Н	Н	CSSMe	Me	Ме
I-201	Н	OPh	Н	Н	H	CSSMe	Ме	Ме
I-202	Н	H	Ph	H	H	CSSMe	Ме	Ме
I-203	Ph	H	Н	H	Н	CSSMe	Ме	Ме
I-204	Н	Ph	Η	Η	Н	CSSMe	Ме	Ме
I-205	Pr <sup>i</sup>	Н	Τ	Ι	Н	CSOMe	Me	Ме
I-206	Pr <sup>i</sup>	Н		Н	Н	CSSMe	Ме	Ме
I-207	OMe	Η	(Morphol ino) CO	H	Н	CSSMe	Ме	Ме
I-208	Н	Τ	NMe <sub>2</sub>	Н	H	CSSMe	Ме	Me
I-209	H	NMe <sub>2</sub>	Н	Н	H	CSSMe	Ме	Ме
I-210	N(Me)Et	H	H ,	H	Н	CSSMe	Ме	Ме
I-211	N(Me)Pr	H	H	H	H	CSSMe	Ме	Ме
I-212	NEt <sub>2</sub>	H	H	H	Н	CSSMe	Ме	Ме
I-213	F	Н	H	H	F	CSSMe	Ме	Ме
I-214	Pr <sup>i</sup>	H	CI	H	H	CSSMe	Me	Ме
I-215	NMe <sub>2</sub>	Me	Н	Н	H	CSSMe	Ме	Ме
I-216	NMe <sub>2</sub>	H	Me	Н	H	CSSMe	Ме	Ме
I-217	NMe₂	H	H	Me	Н	CSSMe	Ме	Ме
I-218	NMe <sub>2</sub>	Н	Н	CI	Η	CSSMe	Ме	Ме
I-219	Me	Н	Н	H	Me	CSSMe	Ме	Ме
I-220	NMe <sub>2</sub>	H	Н	Н	H	CSSEt	Ме	Me
I-221	H	NMe <sub>2</sub>	Н	Н	Н	CSSEt	Ме	Me
I-222	NMe <sub>2</sub>	Н	Me	Н	Н	CSSEt	Ме	Ме
I-223	H	H	Pr <sup>i</sup>	H	H	CSSEt	Ме	Ме

表 1 3

	R¹	R <sup>2</sup>	R <sup>3</sup>	R⁴	R⁵	Re	R <sup>7</sup>	R <sup>8</sup>
I-224	OMe	Н	CONHMe	Н	Н	CSSMe	Ме	Ме
I-225	OCHF <sub>2</sub>	Н	Н	H	Н	CSSMe	Ме	Ме
I-226	Н	OCHF <sub>2</sub>	. Н	Н	H	CSSMe	Ме	Me
I-227	Н	NEt <sub>2</sub>	Н	Н	H	CSSMe	Me	Ме
I-228	NMe <sub>2</sub>	Н	CI	Н	Н	CSSMe	Ме	Ме
I-229	NMe <sub>2</sub>	H	F	Н	Н	CSSMe	Me	Ме
I-230	NMe <sub>2</sub>	Н	Н	F	H	CSSMe	Ме	Ме
I-231	NMe <sub>2</sub>	Н	Et	Н	Н	CSSMe	Ме	Ме
I-232	NMe <sub>2</sub>	Н	Н	Et	Н	CSSMe	Ме	Ме
I-233	NMe <sub>2</sub>	Н	CI	Η	Н	CSSEt	Me	Ме
I-234	NMe <sub>2</sub>	Н	F	Η	Н	CSSEt	Ме	Ме
I-235	NMe <sub>2</sub>	H	Et	H	Ή	CSSEt	Ме	Me
I-236	Pr <sup>i</sup>	Η.	H	Η	I	CSSBu <sup>s</sup>	Me	Me
I-237	Pr <sup>i</sup>	H	H	H	H	CSSBu <sup>i</sup>	Ме	Ме
I-238	Pr <sup>i</sup>	Н	H	H	H	CSNHMe	Ме	Ме
I-239	Me	NMe <sub>2</sub>	H	H	Н	CSSMe	Ме	Me
I-240	NMe <sub>2</sub>	OMe	H	Н	Н	CSSMe	Ме	Ме
I-241	Н	NMe <sub>2</sub>	Me	Н,	Н	CSSMe	Ме	Ме
I-242	NMe <sub>2</sub>	Cl	H	H	Н	CSSMe	Me	Ме
I-243	Ι	NMe <sub>2</sub>	OMe	Н	Н	CSSMe	Ме	Ме
I-244	Pr <sup>i</sup>	H	Н	H ,	Н	CSSEt	Et	Et
I-245	Pr <sup>i</sup>	Н	H	H	Н	Me	Ме	Ме
I-246	. Pr <sup>i</sup>	H ,	H	H	H	Pr	Me	Ме
I-247	Pr <sup>i</sup>	H	, H	Н	Н	Pr <sup>i</sup>	Ме	Ме
I-248	Pr <sup>i</sup>	Н	H	Н	H	Bu <sup>i</sup>	Me	Me

表 1 4

	A	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-249		CSSM		Me
I-250		CSSMe	e Me	Me
I-251	N—OMe	CSSMe	Me	Me
I-252	N—NMe <sub>2</sub>	CSSMe	Me	Me
I-253	CI—N—	CSSMe	Ме	Ме
I-254	Me O-N-	CSSMe	Ме	Me
I-255	EtO-N-	CSSMe	Me	Me
I-256	PrO-N-	CSSMe	Me	Me
I-257	Prio-(N-)	CSSMe	Me	Me
I-258	MeS N	CSSMe	Me	Me
I-259	EtS-N-	CSSMe	Me	Me
I-260	PrS-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CSSMe	Ме	Me
I-261	Pr <sup>i</sup> s—N—	CSSMe	Me	Me

表 1 5

$$R^2$$
 $R^3$ 
 $R^4$ 
 $R^5$ 
 $R^7$ 
 $R^8$ 

	R¹	R²	R³	R⁴	R⁵	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-262	NMe <sub>2</sub>	Н	OMe	H	Н	CSSMe	Ме	Ме
I-263	NMe <sub>2</sub>	Н	Н	OMe	Н	CSSMe	Ме	Ме
I-264	Ме	NEt <sub>2</sub>	Н	Н	Ι	CSSMe	Ме	Ме
I-265	Н	NEt <sub>2</sub>	Me	Н	Н	CSSMe	Me	Me
I-266	Н	NEt <sub>2</sub>	OMe	Н	Н	'CSSMe	Me	Me
I-267	Bu <sup>s</sup>	Н	H	Н	I	CSSMe	Et	Et
I-268	Pr <sup>i</sup>	Н	Н	Н	Τ	CSSMe	Pr	Pr
I-269	Pr <sup>i</sup>	Η	H	Н	Η	CSSMe	-(CH <sub>2</sub>	)4-
I-270	Pr <sup>i</sup>	Η	H	Н	H	CSSMe	-(CH <sub>2</sub>	)5-

表 1 6

	R¹	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>s</sup>
I-271	Pr <sup>i</sup>	Н	Н	Н	Н	SO₂Me	Ме	Ме
I-272	Pr <sup>i</sup>	н	Н	Н	Н	so <sub>2</sub> -{S	Ме	Ме
I-273	Pr <sup>i</sup>	Н	Н	Н	Н	SO <sub>2</sub> Me	Me	Ме
I-274	Н	Pr <sup>i</sup>	Н	Н	Н	SO <sub>2</sub> -\Me	Ме	Ме
I-275	Н	Pr'	Н	Н	Н	SO <sub>2</sub> Et	Ме	Ме
I-276	Н	Pr <sup>i</sup>	Н	Н	Н	SO <sub>2</sub> NO <sub>2</sub>	Ме	Ме
I-277	Ι	Pr <sup>i</sup>	Η	H	Н	SO <sub>2</sub> OMe	Me	Ме
I-278	Н	Pr <sup>i</sup>	Н	Н	Н	SO <sub>2</sub> NO <sub>2</sub>	Ме	Ме
I-279	Η	Pr <sup>i</sup>	H	H	Н	SO <sub>2</sub> CF <sub>3</sub>	Ме	Ме
I-280	Н	Pr <sup>i</sup>	Н	Н	Н	SO <sub>2</sub>	Ме	Ме

表 1 7

化合物	1	Africa Atta-
番号		物性
No	三十二	NIMB (CDCI)
140	融点	NMR (CDCl <sub>3</sub> )
I-16		110 (011 -) 101 (011 + 1 70) 0.04 (011 ) 0.04
1.10	57-59℃	1.16 (6H, s), 1.31 (3H, t, J = 7.3), 2.64 (2H, s), 2.91 (2H, q, J
	07-09	= 7.3), 3.78 (2H, s), 6.96 (1H,dd, J = 7.4, 1.2), 7.14 (1H, t, J = 7.4), 7.36 (2H, t, J = 7.4).
I-17		1.15 (6H, s), 1.31 (3H, t, $J = 7.4$ ).
1 * * '		= 7.3), 3.77 (2H, s), 7.10-7.15 (4H, m).
I-18		1.16 (6H, s), 1.31 (3H, t, J = 7.3), 2.68 (2H, s), 2.92 (2H, q, J
		= 7.3),3.80 (2H, s), 6.96 (1H, dd, J = 7.7, 1.2), 7.08 (1H, dt, J
		= 7.7, 1.6), 7.25 (2H, t, J = 7.4), 7.40 (1H, d, J = 7.4).
I-19		1.15 (6H, s), 1.27 (3H, t, J = 7.3), 2.24 (3H, s), 2.62 (2H, s),
		2.92 (2H, q, J = 7.4), 3.77 (2H, s), 6.83 (1H, d, J = 7.7), 7.04
		(1H, t, J = 7.7), 7.16-7.22 (2H, m).
I-20		1.15 (6H, s), 1.19 (3H, t, $J = 7.4$ ), 1.31 (3H, t, $J = 7.3$ ), 2.62
		(2H, q, J = 7.3), 2.65 (2H, s), 2.94 (2H, q, J = 7.4), 3.77 (2H,
		s), 6.83 (1H, d, J = 7.6), 7.10-7.22 (3H, m).
I-21	·	0.95 (3H, t, $J = 7.3$ ), $1.15$ (6H, s), $1.30$ (3H, t, $J = 7.4$ ),
1		1.50-1.64 (2H, m), 2.56 (2H, q, J = 7.3), 2.59 (2H, s), 2.90
		(2H, q, J = 7.4), 3.76 (2H, s), 6.82 (1H, d, J = 7.3), 7.06-7.28
T 00		(3H, m).
I-22		0.90  (3H, t, J = 7.1),  1.15  (6H, s),  1.29  (3H, t, J = 7.4),
i i		1.30-1.34 (2H, m), $1.52-1.58$ (2H, m), $2.54$ (2H, q, J = 7.1),
		2.62 (2H, s), 2.92 (2H, q, J = 7.4), 3.76 (2H, s), 6.79 (1H, dd,
I-23		J = 7.9, 1.4), 7.06-7.28 (3H, m).
1-20		0.86 (3H, t, J = 7.4), 1.14 (6H, s), 1.16 (6H, d, J = 6.9), 1.29
		(3H, t, J = 7.4), 1.48-1.58 (2H, m), 2.61 (2H, s), 2.89 (2H, q, J = 7.4), 2.88-2.92 (1H, m), 3.76 (2H, d, J = 13.6), 3.82
		(1H,d, J = 13.6), 6.82-6.88 $(1H, m), 7.10-7.18$ $(1H, m), [1.00-2.02]$
		7.23-7.29 (1H, m).
I-24		1.15 (6H, s), 1.27 (3H, t, J = 7.4), 1.33 (9H, s), 2.68 (2H, s),
		2.86 (2H, q, J = 7.4), 3.75 (2H, s), 6.86 (1H, dd, J = 7.4, 1.6),
		7.08-7.19 (2H, m), 7.38 (2H, dd, J = 7.4, 1.6).
I-25		0.99 (6H, s), 1.25 (3H, t, J = 7.4), 2.45 (2H, s), 2.82 (2H, q, J
		= 7.4), $3.51$ (2H, s), $6.98$ (1H, d, $J = 7.7$ ), $7.20-7.36$ (6H, m),
		7.43 (2H, m).
I-26		1.15 (6H, s), 1.29 (3H, t, J = 7.3), 2.66 (2H, s), 2.89 (2H, q, J
	82-83℃	= 7.4), 3.77 (2H, s), 6.98 (1H, d, $J = 7.6$ ), 7.19 (1H, t, $J = 1$ )
		7.6), 7.49 (1H, t, $J = 7.6$ ), 7.64 (1H, d, $J = 7.6$ ).

# 表 18

化合物		物性
番号		ATT FD (GD GL)
No	融点	$\mathrm{NMR}\;(\mathrm{CDCl_8})$
I-27		1.16 (6H, s), 1.25 (3H, t, J = 7.4), 2.62 (2H, s), 2.88 (2H, q, J
		= 7.4), 3.78 (2H, s), 3.83 (3H, s), 6.91-6.96 (3H, m), 7.05-7.14
		(1H, m).
I-28		1.15 (6H, s), 1.30 (3H, t, $J = 7.4$ ), 1.40 (3H, t, $J = 7.0$ ), 2.60
		(2H, s), 2.90 (2H, q, J = 7.4), 3.78 (2H, s), 4.08 (2H, q, J = 7.0), 6.00 (2H, q, J = 7.0), 7.00 (1H, m)
T 00		7.0), 6.90-6.94 (3H, m), 7.06-7.08 (1H, m).
I-29		1.14 (6H, s), 1.29 (6H, d, J = 7.4), 1.31 (6H, d, J = 6.0), 2.59 (2H, s), 2.89 (2H, q, J = 7.4), 3.76 (2H, s), 4.50 (1H, q, J =
		6.0), 6.90-6.93 (3H, m), 7.01-7.07 (1H, m).
I-30		1.15 (6H, s), 1.29 (3H, t, J = 7.4), 2.43 (3H, s), 2.63 (2H, s),
	78-80°C	2.89 (2H, q, J = 7.4), 3.78 (2H, s), 6.87-6.91 (1H, m), 7.05-
		7.14 (2H, m), 7.20-7.29 (1H, m).
I-31		1.15 (6H, s), 1.29 (3H, t, J = 7.4), 1.31 (3H, t, J = 7.4), 2.66
	55-57℃	(2H, s), 2.89 (2H, q, J = 7.4), 2.94 (2H, q, J = 7.4), 3.78 (2H, l), 3.7
		s), 6.91 (1H, dd, J = 7.4, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.4, 1.6).
I-32		1.15 (6H, s), 1.27 (6H, d, J = 6.6), 1.28 (6H, d, J = 7.4), 2.65
1.02		(2H, s), 2.88 (2H, q, J = 7.4), 3.38-3.42 (1H, m), 3.78 (2H, s),
		6.90 (1H, dd, J = 7.7, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J
		= 7.7, 1.6).
I-33		1.15 (6H, s), 1.29 (3H, t, J = 7.4), 2.60 (2H, s), 2.71 (6H, s),
		2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.90-6.98 (3H, m), 7.05-
I-34		7.10 (1H, m). 1.16 (6H, s), 1.27 (6H, d, J = 6.9), 1.31 (3H, t, J = 7.4), 2.64
1-04		(2H, s), 2.91 $(2H, q, J = 7.4), 2.98$ $(1H, q, J = 6.9), 3.77$ $(2H, J)$
		s), 6.78-6.83 (2H, m), 7.01-7.04 (1H, m), 7.25-7.27 (1H, m).
I-35	68-69℃	1.16 (6H, s), 1.30 (3H, t, J = 7.3), 2.66 (2H, s), 2.90 (2H, q, J
		= 7.3), 3.76 (2H, s)6.98 (2H, dd, J = 6.6, 2.1), 7.31 (2H, dd, J
		= 6.6, 2.1).
I-36	05 000	1.15 (6H, s), 1.20 (6H, d, J = 6.9), 1.26 (3H, t, J = 7.4), 2.64
	67-69℃	(2H, s), 2.86 (2H, q, J = 7.4), 2.89 (1H, q, J = 6.9), 3.75 (2H, s), 6.98 (2H, d, J = 8.2), 7.20 (2H, d, J = 8.3).
I-37	125-	1.15 (6H, s), 1.30 (3H, t, J = 7.3), 2.72 (2H, s), 2.92 (2H, q, J
1.01	126℃	= 7.3), 3.78 (2H, s), 7.05 (2H, d, J=8.3), 7.31 (2H, d, J=8.3).
I-38		1.15 (6H, s), 1.30 (3H, t, J = 7.4), 2.14 (3H, s), 2.29 (3H, s),
	76-78℃	2.63 (2H, s), 2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.70 (1H, d, J)
		= 7.9), 6.94 (1H, d, J = 7.9), 7.06 (1H, s).

表 1 9

化合物		物性
番号		初生
No	融点	NMR (CDCl <sub>3</sub> )
I-39		1.14 (6H, s), 1.29 (3H, t, J = 7.4), 2.21 (3H, s), 2.32 (3H, s),
		2.65 (2H, s), 2.89 (2H, q, J = 7.4), 3.76 (2H, s), 6.73 (1H, d,
I-40		J = 7.9), 6.97 (1H, d, J = 7.9), 7.02 (1H, s).
1-40		1.15 (6H, s), 1.30 (3H, t, J = 7.4), 2.19 (3H, s), 2.31 (3H, s), 2.64 (2H, s), 2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.65 (1H, s),
		6.86 (1H, d, J = 7.9), 7.07 (1H, d, J = 7.7).
I-41	59-61℃	1.15 (6H, s), 1.30 (3H, t, $J = 7.3$ ), 2.19 (6H, s), 2.62 (2H, s),
		2.90 (2H, q, J = 7.3), 3.78 (2H, s), 6.90-6.96 (1H,m), 7.02-
		7.08 (2H, m).
I-42		1.15 (6H, s), $1.31$ (3H, t, $J = 7.4$ ), $2.26$ (3H, s), $2.28$ (3H, s),
		2.65 (2H, s), 2.91 (2H, q, J = 7.4), 3.78 (2H, s), 6.74 (1H, dd,
I-43		J = 7.9, 1.8), 6.80 (1H, d, J = 1.8), 7.13 (1H, d, J = 7.7). 1.15 (6H, s), 1.31 (3H, t, J = 7.4), 2.31 (6H, s), 2.63 (2H, s),
1 10		2.90 (2H, q, J = 7.4), 3.76 (2H, s), 6.58 (2H, s), 6.77 (1H, s).
I-44		1.15 (6H, s), 1.28 (3H, t, $J = 7.4$ ), 2.21 (3H, s), 2.64 (2H, s),
		2.90 (2H, q, $J = 7.4$ ), 3.76 (2H, s), 6.74 (1H, d, $J = 8.2$ ),
		7.10-7.18 (2H, m).
I-45		1.15 (6H, s), 1.28 (3H, t, J = 7.4), 2.31 (3H, s), 2.66 (2H, s),
		2.92 (2H, q, J = 7.4), 3.78 (2H, s), 6.74 (1H, d, J = 7.8), 7.04
I-46		(1H, d, J = 7.8), 7.25 (1H, d, J = 7.8). 1.16 (6H, s), 1.25 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 2.69
	119-	(2H, s), 2.90 (2H, q, J = 7.4), 3.15 (1H, m), 3.79 (2H, s), 6.92
	120℃	(1H, d, J = 8.7), 8.01 (1H, dd, J = 8.5, 2.4), 8.18 (1H, d, J = 1.5)
		(2.4).
I-47		1.17 (6H, s), 1.23 (6H, d, J = 6.9), 1.30 (3H, t, J = 7.4), 2.69
		(2H, s), 2.91 (2H, q, J = 7.4), 3.19 (1H, m), 3.79 (2H, s), 7.41
	i	(1H, d, J = 8.7), 7.71 (1H, d, J = 2.4), 7.92 (1H, dd, J = 8.7, 2.4).
I-48		1.15 (6H, s), 1.30 (3H, t, J = 7.4), 2.73 (2H, s), 2.93 (2H, q, J
		= 7.4), 3.82 (2H, s)7.15 (2H, d, J = 8.3), 8.48 (1H, dd, J =
		8.3, 1,4), 8.90 (1H, d, J =8.3).
I-49		0.95  (3H, t, J = 7.3),  1.15  (6H, s),  1.50-1.64  (2H, m),  2.32
	64-66°C	(3H, s), 2.56 (2H, q, J = 7.3), 2.63 (2H, s), 3.78 (2H, s), 6.82
	i	(1H, d, J = 7.3),
I-50		7.06-7.28 (3H, m).
1-00	95-96℃	1.16 (6H, s), 1.20 (6H, d, J = 6.9), 2.32 (3H, s), 2.64 (2H, s), 3.12 (1H, q, J = 6.9), 3.79 (2H, s), 6.78-6.82 (1H, m),
	30 00 0	7.11-7.20 (2H, m), 7.30-7.34 (1H, m).
		(

表 2 0

化合		物性
物番号		
No	融点	NMR (CDCl <sub>3</sub> )
I-51	70 7000	0.85 (3H, t, J = 7.3), 1.15 (6H, d, J = 6.9), 1.18 (6H, s),
	53-56℃	1.57-1.70 (2H, m), 2.31 (3H, s), 2.62 (2H, s), 2.91 (1H, q, J = 6.9), 3.74 (1H, d, J = 13.7), 3.78 (1H, d, J = 13.7), 6.78-6.83
		(1H, m), 7.11-7.18 (2H, m), 7.23-7.30 (1H, m).
I-52	— — —	1.17 (6H, s), 1.27 (6H, d, J = 6.9), 2.33 (3H, s), 2.65 (2H, s),
	88-90℃	2.91 (1H, q, J = 6.9), 3.79 (2H, s), 6.78-6.83 (2H, m), 7.01- 7.04 (1H, m), 7.20-7.24 (1H, m).
I-53		1.16 (6H, s), 2.32 (3H, s), 2.65 (2H, s), 3.77 (2H, s), 3.87
		(6H, s), 6.51-6.59 (2H, m), 6.80-6.89 (1H, m).
I-54	102-	1.15 (6H, s), 2.31 (3H, s), 2.65 (2H, s), 3.76 (2H, s), 5.96
	104℃	(2H, s), 6.42 (1H, dd, J = 8.1, 1.8), 6.53 (1H, d, J = 1.8), 6.78
		(1H, d, J = 8.1).
I-55	129-	1.16 (6H, s), 2.32 (3H, s), 2.67 (2H, s), 3.78 (2H, s), 3.85
	131℃	(6H, s), 3.86 (3H, s), 6.20 (2H, s)
I-56	107-	1.17 (3H, t, J = 7.6), 1.22 (6H, s), 2.58 (2H, q, J = 7.6), 2.64
	109℃	$\begin{array}{c} (3H, s), 2.66 \ (2H, s), 4.51 \ (2H, s), 6.91 \ (1H, dd, J = 7.5, 1.3), \\ 7.02-7.19 \ (2H, m), 7.23-7.28 \ (1H, m). \end{array}$
I-57		0.85 (3H, t, J = 7.3), 1.18 (6H, d, J = 6.9), 1.23 (6H, s),
1-01		1.57-1.70 (2H, m), 2.64 (3H, s), 2.66 (2H, s), 2.88 (1H, q, J =
		6.9), 4.38 (1H, d, J = 13.7), 4.60 (1H, d, J = 13.7), 6.83-6.90
		(1H, m), 7.11-7.18 (2H, m), 7.28-7.35 (1H, m).
I-58	85-87℃	1.22 (6H, s), 2.62 (3H, s), 2.63 (2H, s), 3.35 (3H, s), 4.40
		(2H, s), 4.48 (2H, s), 6.93-6.99 (1H, m), 7.11-7.29 (2H, m),
		7.40-7.49 (1H, m).
I-59	113-	1.22 (3H, s), 1.24 (3H, s), 1.37 (3H, d, J = 6.4), 2.63 (3H, s),
	114℃	2.65 (2H, s), 3.24 (3H, s), 4.35 (1H, d, J = 13.6), 4.55 (1H, q,
		J = 6.4), 4.66 (1H, d, J = 13.6), 6.91 (1H, d, J = 7.4), 7.19- 7.40 (2H, m), 7.51 (1H, d, J = 7.4).
I-60	128-	1.22 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 3.85 (3H, s), 4.53
1-00	130°C	(2H, s), 6.93-6.99 (2H, m), 7.02-7.15 (2H, m).
I-61	100-	1.26 (6H, s), 1.43 (3H, t, J = 7.4), 2.66 (2H, s), 2.67(3H, s),
	101℃	4.08 (2H, q, J = 7.0), 4.55 (2H, s), 6.95-6.99 (3H, m), 7.11-
		7.18 (1H, m).
I-62	137-	1.23 (6H, s), 2.43 (3H, s), 2.64 (3H,s), 2.67 (2H, s), 4.53
	139℃	(2H, s), 6.87-6.92 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H,
		m).

表 2 1

化合物 番号
I-63  I-63  I-63  I-64  I-64  I-64  I-65  I-65  I-66  I-66  I-67  I-68  I-68  I-68  I-69  I-68  I-69  I-70
$ \begin{array}{c} 103-\\ 105^{\circ}\text{C} \\ \end{array} \begin{array}{c} (2\text{H, s}), \ 2.89 \ (2\text{H, q}, \ J=7.4), \ 2.94 \ (2\text{H, q}, \ J=7.4), \ 3.78 \ (2\text{H, dd}, \ J=7.4), \ 1.6), \ 7.08-7.20 \ (2\text{H, m}), \ 7.32 \ (1\text{H, dd}, \ J=7.4, \ 1.6), \ 7.08-7.20 \ (2\text{H, m}), \ 7.32 \ (1\text{H, dd}, \ J=7.4, \ 1.6), \ 1.24 \ (6\text{H, s}), \ 1.28 \ (6\text{H, d}, \ J=6.6), \ 2.63 \ (3\text{H, s}), \ 2.66 \ (2\text{H, s}), \ 3.38-3.42 \ (1\text{H, m}), \ 4.53 \ (2\text{H, s}), \ 6.97 \ (1\text{H, dd}, \ J=7.7, \ 1.6), \ 7.08-7.20 \ (2\text{H, m}), \ 7.32 \ (1\text{H, dd}, \ J=7.7, \ 1.6), \ 1.22 \ (6\text{H, s}), \ 2.63 \ (3\text{H, s}), \ 2.65 \ (2\text{H, d}, \ J=13.6), \ 2.75 \ (3\text{H, s}), \ 3.38 \ (3\text{H, s}), \ 2.63 \ (3\text{H, s}), \ 2.65 \ (2\text{H, d}, \ J=13.6), \ 2.75 \ (3\text{H, s}), \ 3.38 \ (3\text{H, s}), \ 2.63 \ (3\text{H, s}), \ 2.64 \ (3\text{H, s}), \ 2.70 \ (1\text{H, dd}, \ J=7.7, \ 1.7). \ 1.23 \ (6\text{H, s}), \ 2.63 \ (3\text{H, s}), \ 2.71 \ (2\text{H, s}), \ 3.13 \ (3\text{H, s}), \ 4.50 \ (2\text{H, s}), \ 3.13 \ (3\text{H, s}), \ 2.66 \ (2\text{H, s}), \ 1.29 \ (2\text{H, s}), \ 1.23 \ (3\text{H, t}, \ J=6.9), \ 2.63 \ (3\text{H, s}), \ 2.66 \ (2\text{H, s}), \ 1.29 \ (2\text{H, s}), \ 3.20 \ (1\text{H, d}, \ J=7.5), \ 7.30 \ -7.45 \ (2\text{H, m}), \ 7.90 \ (1\text{H, d}, \ J=7.5). \ 1.23 \ (6\text{H, s}), \ 2.62 \ (3\text{H, s}), \ 2.65 \ (2\text{H, s}), \ 2.71 \ (6\text{H, s}), \ 4.50 \ (2\text{H, s}), \ 6.93 \ -6.99 \ (3\text{H, m}), \ 7.02 \ -7.15 \ (1\text{H, m}). \ 1.23 \ (6\text{H, s}), \ 2.62 \ (3\text{H, s}), \ 2.65 \ (2\text{H, s}), \ 2.71 \ (6\text{H, s}), \ 4.50 \ (2\text{H, s}), \ 6.93 \ -6.99 \ (3\text{H, m}), \ 7.02 \ -7.15 \ (1\text{H, m}). \ 1.23 \ (6\text{H, s}), \ 2.62 \ (3\text{H, s}), \ 2.65 \ (2\text{H, s}), \ 2.66 \ (2\text{H, s}), \ 2.92 \ (1\text{H, m}), \ 7.28 \ -7.32 \ (1\text{H, m}). \ 1.23 \ (6\text{H, s}), \ 2.64 \ (3\text{H, s}), \ 2.68 \ (2\text{H, s}), \ 4.51 \ (2\text{H, s}), \ 6.97 \ (2\text{H, d}, \ J=8.6), \ 7.35 \ (2\text{H, d}, \ J=8.6). \ 1.22 \ (6\text{H, s}), \ 2.64 \ (3\text{H, s}), \ 2.68 \ (2\text{H, s}), \ 4.51 \ (2\text{H, s}), \ 6.97 \ (2\text{H, d}, \ J=8.6), \ 7.35 \ (2\text{H, d}, \ J=8.6). \ 1.22 \ (6\text{H, s}), \ 4.50 \ (2\text{H, s}), \ 6.97 \ (2\text{H, d}, \ J=8.6), \ 7.35 \ (2\text{H, d}, \ J=8.6). \ 1.22 \ (6\text{H, s}), \ 4.50 \ (2\text{H, s}),$
103-   105°C   (2H, s), 2.89 (2H, q, J = 7.4), 2.94 (2H, q, J = 7.4), 3.78 (2H, s), 6.91 (1H, dd, J = 7.4, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.4, 1.6).   1.24 (6H, s), 1.28 (6H, d, J = 6.6), 2.63 (3H, s), 2.66 (2H, s), 126°C   7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.7, 1.6), 126°C   7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.7, 1.6).   1.22 (6H, s), 2.63 (3H, s), 2.65 (2H, d, J = 13.6), 2.75 (3H, s), 4.17 (1H, d, J = 13.6), 4.77 (1H, d, J = 13.6), 7.06 (1H, dd, J = 7.7, 1.7), 7.19-7.40 (2H, m), 7.97 (1H, dd, J = 7.7, 1.7).   1.23 (6H, s), 2.63 (3H, s), 2.71 (2H, s), 3.13 (3H, s), 4.52 (2H, s), 7.11 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).   1.22 (6H, s), 1.23 (3H, t, J = 6.9), 2.63 (3H, s), 2.66 (2H, s), 1.30°C   4.70 (1H, d, J = 13.6), 7.06 (1H, d, J = 7.5), 7.30-7.45 (2H, m), 7.90 (1H, d, J = 7.5).   1.23 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).   1.23 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).   1.23 (6H, s), 2.64 (3H, s), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).   1.23 (6H, s), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).   1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.97 (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).   1.20 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, d, J = 8.6).   1.22 (6H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J
I-64
I-64
125- 126°C  3.38-3.42 (1H, m), 4.53 (2H, s), 6.97 (1H, dd, J = 7.7, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.7, 1.6).  1.22 (6H, s), 2.63 (3H, s), 2.65 (2H, d, J = 13.6), 2.75 (3H, s), 4.17 (1H, d, J = 13.6), 4.77 (1H, d, J = 13.6), 7.06 (1H, dd, J = 7.7, 1.7), 7.19-7.40 (2H, m), 7.97 (1H, dd, J = 7.7, 1.7).  1-66  147- 149°C  (2H, s), 7.11 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).  1-67  1.22 (6H, s), 1.23 (3H, t, J = 6.9), 2.63 (3H, s), 2.66 (2H, s), 2.70-2.85 (1H, m), 2.90-3.15 (1H, m), 4.25 (1H, d, J = 13.6), 4.70 (1H, d, J = 13.6), 7.06 (1H, d, J = 7.5), 7.30-7.45 (2H, m), 7.90 (1H, d, J = 7.5).  1-68  100- 102°C  (2H, s), 6.93-6.99 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 102°C  (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).  1-69  1.23 (6H, s), 1.25 (6H, d, J = 6.9), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08- 7.13 (1H, m), 7.28-7.32 (1H, m).  1-70  116- 118°C  (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  1-71  103- 118°C  (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J =
126°C 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.7, 1.6).  1-65  1.22 (6H, s), 2.63 (3H, s), 2.65 (2H, d, J = 13.6), 2.75 (3H, s), 4.17 (1H, d, J = 13.6), 4.77 (1H, d, J = 13.6), 7.06 (1H, dd, J = 7.7, 1.7), 7.19-7.40 (2H, m), 7.97 (1H, dd, J = 7.7, 1.7).  1-66  147- 1.23 (6H, s), 2.63 (3H, s), 2.71 (2H, s), 3.13 (3H, s), 4.52 (2H, s), 7.11 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).  1-67  1.29- 1.29 (2H, s), 1.23 (3H, t, J = 6.9), 2.63 (3H, s), 2.66 (2H, s), 130°C 4.70 (1H, d, J = 13.6), 7.06 (1H, d, J = 7.5), 7.30-7.45 (2H, m), 7.90 (1H, d, J = 7.5).  1-68  100- 102°C (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).  1-69  1.23 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).  1-70  116- 1171  116- 118°C (2H, d, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).  1-71  103- 1164 1171  103- 1172 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 4.50 (2H, s), 5.73 (2H, d, J = 8.6).
$\begin{array}{c} \text{I-65} \\ \text{I-22 (6H, s), 2.63 (3H, s), 2.65 (2H, d, J = 13.6), 2.75 (3H, s),} \\ \text{A.17 (1H, d, J = 13.6), 4.77 (1H, d, J = 13.6), 7.06 (1H, dd, J = 7.7, 1.7), 7.19-7.40 (2H, m), 7.97 (1H, dd, J = 7.7, 1.7).} \\ \text{I-66} \\ \text{I47-} \\ \text{I49°C} \\ \text{(2H, s), 7.11 (1H, m,), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).} \\ \text{I-67} \\ \text{I29-} \\ \text{I30°C} \\ \text{I30°C} \\ \text{I-68} \\ \text{I00-} \\ \text{I02°C} \\ \text{(2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).} \\ \text{I-69} \\ \text{I-69} \\ \text{I-71} \\ \text{I-69} \\ \text{I-70} \\ \text{I16-} \\ \text{I-70} \\ \text{I18°C} \\ \text{(2H, s), 4.50 (2H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 6.97 (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).} \\ \text{I-71} \\ \text{I03-} \\ \text{I-72} \\ \text{I-73} \\ \text{I-74} \\ \text{I-75} \\ \text{I-75} \\ \text{I-76} \\ \text{I-76} \\ \text{I-77} \\ \text{I-78} \\ \text{I-78} \\ \text{I-79} \\ I-$
s), 4.17 (1H, d, J = 13.6), 4.77 (1H, d, J = 13.6), 7.06 (1H, dd, J = 7.7, 1.7), 7.19-7.40 (2H, m), 7.97 (1H, dd, J = 7.7, 1.7).  I-66 147- 1.23 (6H, s), 2.63 (3H, s), 2.71 (2H, s), 3.13 (3H, s), 4.52 149°C (2H, s), 7.11 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).  I-67 129- 1.22 (6H, s), 1.23 (3H, t, J = 6.9), 2.63 (3H, s), 2.66 (2H, s), 130°C 4.70 (1H, d, J = 13.6), 7.06 (1H, d, J = 7.5), 7.30-7.45 (2H, m), 7.90 (1H, d, J = 7.5).  I-68 100- 102°C (2H, s), 6.93-6.99 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 102°C (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).  I-69 1.23 (6H, s), 1.25 (6H, d, J = 6.9), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08- 7.13 (1H, m), 7.28-7.32 (1H, m).  I-70 116- 1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.97 118°C (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  I-71 103- 1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J =
$\begin{array}{c} 4.17 \ (1 \text{H},  \text{d},  \text{J} = 13.6), 4.77 \ (1 \text{H},  \text{d},  \text{J} = 13.6),  7.06 \ (1 \text{H},  \text{dd},  \text{J} \\ = 7.7,  1.7),  7.19\text{-}7.40 \ (2 \text{H},  \text{m}),  7.97 \ (1 \text{H},  \text{dd},  \text{J} = 7.7,  1.7). \\ \hline \text{I-66} \\ 147\text{-} \\ 149^{\circ}\text{C} \\ (2 \text{H},  \text{s}),  2.63 \ (3 \text{H},  \text{s}),  2.71 \ (2 \text{H},  \text{s}),  3.13 \ (3 \text{H},  \text{s}),  4.52 \\ (2 \text{H},  \text{s}),  7.11 \ (1 \text{H},  \text{m}),  7.11\text{-}7.20 \ (2 \text{H},  \text{m}),  7.23\text{-}7.29 \ (1 \text{H},  \text{m}). \\ \hline \text{I-67} \\ \\ 129\text{-} \\ 2.70\text{-}2.85 \ (1 \text{H},  \text{m}),  2.90\text{-}3.15 \ (1 \text{H},  \text{m}),  4.25 \ (1 \text{H},  \text{d},  \text{J} = 13.6), \\ 130^{\circ}\text{C} \\ 4.70 \ (1 \text{H},  \text{d},  \text{J} = 13.6),  7.06 \ (1 \text{H},  \text{d},  \text{J} = 7.5),  7.30\text{-}7.45 \ (2 \text{H},  \text{m}), \\ 4.70 \ (1 \text{H},  \text{d},  \text{J} = 13.6),  7.06 \ (1 \text{H},  \text{d},  \text{J} = 7.5),  7.30\text{-}7.45 \ (2 \text{H},  \text{m}), \\ 7.90 \ (1 \text{H},  \text{d},  \text{J} = 7.5). \\ \hline \hline \text{I-68} \\ 102^{\circ}\text{C} \\ (2 \text{H},  \text{s}),  6.93\text{-}6.99 \ (3 \text{H},  \text{s}),  2.65 \ (2 \text{H},  \text{s}),  2.71 \ (6 \text{H},  \text{s}),  4.50 \\ (2 \text{H},  \text{s}),  6.93\text{-}6.99 \ (3 \text{H},  \text{m}),  7.02\text{-}7.15 \ (1 \text{H},  \text{m}). \\ \hline \hline \text{I-69} \\ \hline \\ 1.23 \ (6 \text{H},  \text{s}),  1.25 \ (6 \text{H},  \text{d},  \text{J} = 6.9),  2.64 \ (3 \text{H},  \text{s}),  2.66 \ (2 \text{H},  \text{s}), \\ 2.92 \ (1 \text{H},  \text{q},  \text{J} = 6.9),  4.52 \ (2 \text{H},  \text{s}),  6.84\text{-}6.86 \ (2 \text{H},  \text{m}),  7.08\text{-} \\ 7.13 \ (1 \text{H},  \text{m}),  7.28\text{-}7.32 \ (1 \text{H},  \text{m}). \\ \hline \hline \text{I-70} \\ \hline \\ 118^{\circ}\text{C} \\ (2 \text{H},  \text{d},  \text{J} = 8.6),  7.35 \ (2 \text{H},  \text{d},  \text{J} = 8.6). \\ \hline \hline \text{I-71} \\ \hline \\ 103\text{-} \\ (2 \text{H},  \text{d},  \text{J} = 8.6),  7.35 \ (2 \text{H},  \text{d},  \text{J} = 7.9),  6.98 \ (1 \text{H},  \text{d},  \text{J} = 7.9),  6.98 $
1.66
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
I-68 100- 102°C 102°C (2H, s), 2.62 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).  I-69 1.23 (6H, s), 1.25 (6H, d, J = 6.9), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08- 7.13 (1H, m), 7.28-7.32 (1H, m).  I-70 116- 1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.97 (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  I-71 103- 1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 105°C (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J =
102°C (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).  1-69  1.23 (6H, s), 1.25 (6H, d, J = 6.9), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).  1-70  116- 1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.97 (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  1-71  103- 1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9)
2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).  I-70 116- 118°C (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  I-71 103- 105°C (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J
7.13 (1H, m), 7.28-7.32 (1H, m).  I-70  116- 118°C  (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  I-71  103- 105°C  (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9), 6
I-70 116- 1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.97 (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).  I-71 103- 1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9)
118°C       (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).         I-71       103- 105°C       1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9)
I-71 103- 1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9)
105°C (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J =
I-72 100- 1.23 (6H, s), 2.18 (3H, s), 2.32 (3H, s), 2.64 (3H, s), 2.65
101°C (2H, s), 4.51 (2H, s), 6.71 (1H, s), 6.88 (1H, d, $J = 7.9$ ), 7.08
I-73     93-95°C     1.22 (6H, s), 2.12 (3H, s), 2.30 (3H, s), 2.64 (3H, s), 2.65
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
7.9), 7.08 (1H, t, J = 7.9).
I-74   126-   1.23 (6H, s), 2.25 (3H, s), 2.27 (3H, s), 2.64 (3H, s), 2.65
128°C (2H, s), 4.51 (2H, s), 6.76 (1H, d, $J = 7.9$ ), 6.82 (1H, s), 713
(1H, d, J = 7.9).
1-75 96-98°C 1.23 (6H, s), 2.32 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 4.51
I-76 (2H, s), 6.64 (2H, s), 6.80 (1H,s). 1.22 (6H, s), 2.64 (3H, s), 2.65 (2H, s), 3.79 (3H, s), 3.88
(3H, s), 4.52 (2H, s), 6.60 (1H, d, J = 7.9), 6.73 (1H, d, J = 7.9)
7.9), 7.04 (1H, d, J = 7.9).

表 2 2

化合物		物性
番号		
No	融点	NMR (CDCl <sub>3</sub> )
I-77		1.24 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 3.87 (6H, s), 4.50 (2H,
		s), 6.61-6.65 (2H, m), 6.85-6.89 (1H, m).
I-78		1.22 (6H, s), 2.62 (3H, s), 2.66 (2H, s), 3.81 (6H, s), 4.52 (2H,
		s), 6.48 (1H, dd, J=8.5, 2.4), 6.51 (1H, d, J=2.4), 6.92 (1H, d, J=8.5).
I-79		1.22 (6H, s), 2.62 (3H, s), 2.64 (2H, s), 3.77 (6H, s), 4.52 (2H, s),
		6.56 (1H, d, J = 2.4), 6.68 (1H, dd, J = 8.5, 2.4), 686 (1H, d, J = 8.5).
I-80	108-	1.23 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 4.49 (2H, s), 6.04 (2H,
,	110℃	s), 6.50 (1H, dd, J = 8.1, 1.8), 6.61 (1H, d, J = 1.8), 6.83 (1H, d, J = 8.1).
I-81		1.23 (6H, s), 1.25 (6H, d, J = 6.9), 2.65 (3H, s), 2.71 (2H, s),
		3.11 (1H, q, J = 6.9), 4.51 (2H, s),7.02 (1H, d, J = 8.5), 8.04 (1H, dd, J = 8.5, 2.7), 8.21 (1H, d, J = 2.7).
I-82		1.21 (6H, s), 1.24 (6H, d, J = 6.9), 2.63 (3H, s), 2.66 (2H, s), 3.17 (1H, q, J = 6.9), 4.51 (2H, s), 7.45 (1H, d, J = 8.5), 7.80 (1H, d, J = 2.4), 7.99 (1H, dd, J = 8.5, 2.4).
I-83		1.24 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 3.85 (6H, s), 3.86 (3H,
I-84	68-70	s), 4.51 (2H, s), 6.28 (2H, s). 1.22 (6H, d, J = 6.9), 1.23 (6H, s), 1.35 (3H, t, J = 7.4), 2.65 (2H,
		s), 3.11 (1H, q, J = 6.9), 3.25 (2H, q, J = 6.9), 4.48 (2H, s), 6.89-6.92 (1H, m), 7.14-7.20 (2H, m), 7.30-7.34 (1H, m).
I-85		0.85 (3H, t, J =7.4), 1.18 (6H, d, J = 6.9), 1.23 (6H, s), 1.35 (3H,
		t, J=7.4), 1.57-1.70 (2H, m), 2.56 (2H, s), 2.87 (1H, q, J=6.9), 3.25 (2H, q, J=7.4), 4.35 (1H, d, J=13.7), 4.60 (1H, d, J=
T 00	00.07	13.7), 6.89-6.92 (1H, m), 7.10-7.18 (2H, m), 7.30-7.34 (1H, m).
I-86	96-97	1.23 (6H, s), 1.36 (3H, t, J = 7.0), 1.40 (3H, t, J = 7.0), 2.63 (2H, s), 3.27 (2H, q, J = 7.4), 4.06 (2H, q, J = 7.0), 4.51 (2H, s),
	105 100	6.92-7.08 (3H, m), 7.11-7.15 (1H, m).
I-87	105-106	1.22 (6H, s), 1.35 (3H, t, J = 7.4), 2.43 (3H, s), 2.66 (2H, s), 3.26 (2H, q, J = 7.4), 4.50 (2H, s), 6.95-6.98 (1H, m), 7.10-7.17
		(2H, m), 7.24-7.29 (1H, m).

表 2 3

化 合物番		物性
号		
No	融点	NMR (CDCl <sub>3</sub> )
I-88		1.23 (6H, s), 1.25 (6H, d, J = 6.9), 1.35 (3H, t, J = 7.4), 2.66 (2H, s), 2.90 (1H, q, J = 6.9), 3.28 (2H, q, J = 7.4), 4.50 (2H, s), 6.84-6.88 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).
I-89		0.98 (3H,t, $J = 7.4$ ), 1.12 (6H, s), 1.22 (6H, d, $J = 6.9$ ), 1.72-1.80 (2H,m), 2.58 (2H, s), 2.90 (2H, t, $J = 7.4$ ), 3.06 (1H, q, $J = 6.9$ ), 3.71 (2H, s), 6.71-6.76 (1H, m), 7.11-7.20 (2H, m), 7.30-7.34 (1H, m).
I-90	99- 101℃	1.14 (6H, s), 1.21 (6H, d, J = 6.9), 2.58 (2H, s), 3.14 (1H, q, J = 6.9), 3.64 (2H, s), 3.86 (3H, s),6.73-6.78 (1H, m), 7.11-7.18 (2H, m), 7.28-7.35 (1H, m).
I-91		1.00 (3H, t, J = 7.3), 1.14 (6H, s), 1.20 (6H, d, J = 6.9), 1.74 (2H, q, J = 7.3), 2.58 (2H, s), 3.16 (1H, q, J = 6.9), 3.65 (2H, s), 4.23 (2H, q, J = 6.9), 6.73-6.80 (1H, m), 7.12-7.18 (2H, m), 7.31-7.34 (1H, m).
I-92	52-53℃	1.13 (6H, s), 1.19 (6H, d, J = 6.9), 1.20 (3H, t, J = 7.4), 2.60 (2H, s), 2.98 (1H, q, J = 6.9), 3.38 (2H, q, J = 7.4), 3.77 (2H, s), 6.73-6.78 (1H, m), 7.09-7.18 (2H, m), 7.28-7.32 (1H, m).
I-93	76-78℃	1.14 (6H, s), 1.22 (6H, d, J = 6.9), 2.62 (2H, s), 2.96 (1H, q, J = 6.9), 3.48 (3H, s), 3.75 (2H, s), 4.64 (2H, s), 6.73-6.78 (1H, m), 7.10-7.17 (2H, m), 7.25-7.32 (1H, m).
I-94	61-62℃	1.14 (6H, s), 1.20 (6H, d, J = 6.9), 2.23 (3H, s), 2.68 (2H, s), s), 2.93 (1H, q, J = 6.9), 3.71 (2H, s), 3.94 (2H, s), 6.82-6.86 (1H, m), 7.10-7.18 (2H, m), 7.30-7.36 (1H, m).
I-95	50-52°C	1.13 (6H, s), 1.20 (6H, d, J = 6.9), 1.31 (3H, t, J = 7.3), 2.65 (2H, J = 7.3), 2.68 (2H, s), 2.90 (1H, q, J = 6.9), 3.71 (2H, s), 3.97 (2H, s), 6.82-6.86 (1H, m), 7.12-7.19 (2H, m), 7.30-7.36 (1H, m).
I-96	73-75℃	1.21 (6H, s), 1.22 (6H, d, J = 6.9), 1.42 (3H, t, J = 6.9), 2.61 (2H, s), 3.10 (1H, q, J = 6.9), 4.15 (2H, s), 4.65 (2H, q, J = 6.9), 6.74-6.78 (1H, m), 7.14-7.20 (2H, m), 7.30-7.34 (1H, m).
I-97	160- 162℃	1.18 (6H, s), 1.22 (6H, d, J = 6.9), 1.25 (3H, t, J = 7.4), 2.60 (2H, s), 2.90 (1H, q, J = 6.9), 3.71 (2H, q, J = 7.4), 4.40 (2H, s), 6.74-6.78 (1H, m), 7.14-7.20 (2H, m), 7.30-7.34 (1H, m).
I-98	,	1.04 (3H, t, J = 7.4), 1.20 (6H, d, J = 6.9), 1.27 (6H, s), 1.73 (2H, m), 2.64 (2H, s), 3.12 (1H, q, J = 6.9), 3.22 (2H, t, J = 7.4), 4.48 (2H, s), 6.89-6.92 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).

表 2 4

化合物		物性
番号 No	融点	NMR (CDCl <sub>3</sub> )
I-99	113- 114	1.04 (6H, d, J = 6.9), 1.27 (6H, s), 1.42 (3H, d, J = 6.9), 2.63 (2H, s), 3.14 (1H, q, J = 6.9), 4.02 (1H, q, J = 6.9), 4.46 (8H, s), 6.80 (.02 (1H, m), 7.10 7.20 (2H, m), 7.22
	114	4.46 (2H, s), 6.89-6.93 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).
I-100		1.10 (6H, d, J = 6.9), 1.22 (6H, s), 2.64 (2H, s), 3.08 (1H, q, J = 6.9), 4.48 (2H, s),4.49 (2H, s), 6.83-6.90 (1H, m), 7.11-7.18 (2H, m), 7.20-7.38 (6H, m).
I-101		1.15 (6H, s), 1.25 (3H, t, J = 7.4), 2.70 (2H, s), 2.87 (2H, q, J = 7.4), 3.69 (2H, s), 4.55 (2H, s), 7.30-7.40 (4H, m).
I-102		1.24 (6H, s), 2.57 (3H, s), 2.73 (2H, s), 4.43 (2H, s), 4.58 (2H, s), 7.23-7.40 (4H, m).
I-103		1.11 (6H, s), 1.26 (3H, t, J = 7.4), 2.61 (2H, s), 2.83 (2H, q, J = 7.4), 3.10 (2H, t, J = 7.4), 3.65 (2H, s), 3.66 (2H, t, J = 7.4), 7.17 (1H, dd, J = 8.2, 2.1), 7.30 (1H, t, J = 8.2), 7.36 (1H, d, J = 2.1).
I-104		1.16 (6H, s), 2.55 (3H,s), 2.63 (2H, s), 3.13 (2H, t, J = 7.5), 3.69 (2H, t, J = 7.5), 4.35 (2H, s), 7.15 (1H, dd, J = 8.2, 2.1), 7.25 (1H, t, J = 8.2), 7.36 (1H, d, J = 2.1).
I-105		1.20 (6H, d, J = 6.9), 1.30 (3H, t, J = 7.4), 2.10-2.22 (2H, m), 2.88 (2H, t, J = 6.4), 2.94 (2H, q, J = 7.4), 3.11 (1H, q, J = 6.9), 4.05 (2H, t, J = 7.4), 6.82-6.86 (1H, m), 7.10-7.16 (2H, m), 7.28-7.34 (1H, m).
I-106		1.17-1.30 (12H, m), 1.45-1,52 (1H,m), 1.90-1.96 (1H, m), 2.92 (2H, q, J = 7.4), 2.95-3.05 (2H,m), 3.14-3.23 (1H,m), 3.72-3.75 (1H, m), 7.20-7.30 (2H,m), 7,40-7.45 (2H,m).
I-107		1.22 (6H, d, J = 6.9), 1.28 (3H, d, J = 6.6), 1.29 (3H, t, J = 7.4), 1.75-1.77 (1H,m), 2.29-2.34 (1H, m), 2.88 (2H, q, J = 7.4), 3.14 (1H, m), 3.31-3.36 (1H, m), 4.01-4.10 (2H, m), 6.81-6.85 (1H, m),7.10-7.20 (2H, m), 7.28-7.35 (1H, m).
I-108		1.12 (3H,d, J = 6.6), 1.20 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 2.40-2.50 (1H, m), 2.57 (1H, dd, J = 13.5, 6.6), 2.91 (2H, q, J = 7.4), 2.95 (1H, m), 3.14 (1H, m), 3.45 (1H, dd, J = 13.5, 8.4), 4.30 (1H, dd, J = 13.5, 8.4), 6.81-6.85 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).

表 2 5

化 合物 番		物性
号		
No	融点	$NMR (CDCl_3)$
I-109		0.88 (6H, t, J = 7.5), 1.22 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 1.45-1.52 (4H, m), 2.58 (2H, s), 2.89 (2H, q, J = 7.4), 3.15 (1H,m), 3.77 (2H, s), 6.78-6.83 (1H, m), 7.08-7.21 (2H, m), 7.30-7.35 (1H, m).
I-110	109- 111℃	1.21 (6H, d, J = 6.9), 1.23 (6H, s), 1.25 (3H, t, J = 7.4), 2.81 (2H, q, J = 7.4), 2.90 (1H, t, J = 6.9), 3.05 (2H, s), 7.13-7.30 (2H, m), 7.36-7.45 (2H, m).
I-111		1.21 (6H, d, $J = 6.9$ ), 1.31 (3H, t, $J = 7.4$ ), 1.42 (3H, d, $J = 6.7$ ), 2.90 (2H, q, $J = 7.4$ ), 3.23 (1H, q, $J = 6.9$ ), 3.69 (1H, q, $J = 6.6$ ), 3.87-3.93 (1H, m), 6.78-6.82 (1H, m), 7.08-7.20 (2H, m), 7.25-7.30 (1H, m).
I-112		1.19-1.25 (9H, m), 1.14 (3H, d, J = 6.3), 2.76 (1H, d, J = 10.9), 2.96 (2H, t, J = 7.4), 3.22 (1H, q, J = 6.9), 3.44-3.48 (1H, m), 5.12 (1H, q, J = 6.3), 6.81-6.85 (1H, m), 7.09-7.16 (2H, m), 7.28-7.32 (1H, m).
I-113	126- 128℃	1.18 (6H, d, J = 6.9), 1.22 (6H, d, J = 6.9), 1.45 (3H, t, J = 7.4), 1.80-1.91 (1H,m), 2.57-2.64 (2H, m), 2.61 (3H,s), 2.86-2.89 (1H, m), 3.07 (1H, m), 5.95-6.05 (1H, m), 6.98-7.00 (1H, m), 7.12-7.22 (2H, m), 7.28-7.35 (1H, m).
I-114		1.20 (6H, d, J = 6.9), 1.28 (3H, d, J = 6.9), 1.82-1.88 (1H, m), 2.48-2.63 (1H, m), 2.63 (3H,s), 3.11 (1H, m), 3.29-3.35 (1H, m), 4.26(1H, m), 4.98 (1H, m), 6.90-6.95 (1H, m), 7.15-7.20 (2H, m), 7.30-7.35 (1H, m).
I-115		1.14 (3H, d, J = 6.5), 1.20 (6H, d, J = 6.9), 2.53 (1H, dd, J = 13.0, 5.4), 2.75 (3H,s), 2.80-2.85 (1H, m), 2.95 (1H, dd, J = 13.0, 5.4), 3.11 (1H, m), 3.72 (1H, dd, J = 13.0, 9.0), 5.15 (1H, dd, J = 13.0, 9.0), 6.90-6.95 (1H, m), 7.15-7.25 (2H, m), 7.30-7.35 (1H, m).
I-116	119- 121℃	0.88 (6H, t, J = 7.5), 1.20 (6H, d, J = 6.9), 1.45-1.52 (4H, m), 2.62 (2H, s), 2.64 (3H, s), 3.15 (1H, m), 4.66 (2H, s), 6.78-6.83 (1H, m), 7.08-7.21 (2H, m), 7.30-7.35 (1H, m).
I-117	99- 100℃	0.71-0.79 (1H, m), 0.85-0.90 (2H, m), 1.22 (6H, d, J = 6.9), 1.22-1.25 (1H, m), 2.61 (3H, s), 2.79 (3H, s), 3.00-3.05 (1H, m), 4.40 (2H, s), 6.92-6.95 (1H, m), 7.15-7.21 (2H, m), 7.30-7.35 (1H, m).

表 2 6

化 合物 番号		物性
No	融点	$\mathrm{NMR}\;(\mathrm{CDCl_3})$
I-118		1.23 (6H, s), 1.45 (6H, t, J = 7.4), 2.63 (3H, s), 2.67(2H,s), 4.08 (2H, q, J = 7.0), 4.55 (2H, s), 6.57-6.63 (2H, m), 6.85 (1H, d, J = 7.9).
I-119	116- 118℃	1.24 (6H, s), 2.37 (3H, s), 2.64 (3H, s), 2.66 (2H, s), 3.84 (3H, s), 4.54 (2H, s), 6.75-6.80 (2H, m), 6.88 (1H, m).
I-120	92-93℃	1.23 (6H, s), 2.27 (3H, s), 2.63 (3H, s), 2.67 (2H, s), 3.84 (3H, s), 4.51 (2H, s), 6.51-6.58 (2H, m), 7.10 (1H, d, J = 7.9).
I-121	129- 130°C	1.22 (6H, s); 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 3.80 (3H, s), 4.53 (2H, s), 6.78-6.95 (3H, m).
I-122	93-95℃	1.22 (6H, s), 2.12 (3H, s), 2.30 (3H, s), 2.64 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.76 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9), 7.08 (1H, t, J = 7.9).
I-123	151- 152℃	1.22 (6H, s), 1.83 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 3.17 (3H, s), 4.40 (1H, d, J = 13.6), 4.65 (1H, d, J = 13.6), 7.01 (1H, d, J = 7.9),
		7.10-7.15 (2H, m), 7.30-7.35 (1H, m).

表 2 7

化 合	T	物性
物番		
号		
No	融点	NMR (CDCl <sub>3</sub> )
	1024 7111	
I-124	105-	1.23 (6H, s), 1.41 (3H, t, J=7.0), 2.63 (3H, s), 2.66 (2H,
	106℃	s),4.08 (2H, q, J=7.0), 4.50 (2H, s), 6.88 (2H, d, J=8.6),
		6.98 (2H, d, J=8.6).
I-125	92-94℃	1.23 (6H, s), 1.40 (3H, t, J=7.0), 2.62 (3H, s), 2.66 (2H,
		s), 4.08 (2H, q, J=7.0), 4.50 (2H, s), 6.57-6.63 (2H, m),
		6.70-6.75 (1H, m), 7.25-7.30 (1H, m).
I-126	108-	1.23 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 3.81 (3H, s), 4.50
	109°C	(2H, s), 6.92 (2H, d, J=8.6), 7.04 (2H, d, J=8.6).
I-127	62-64°C	1.23 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 3.82 (3H, s), 4.50
		(2H, s), 6.57-6.63(2H, m), 6.70-6.75(1H, m), 7.25-7.30(1H, m)
		m).
I-128	78-79°C	1.23 (6H, s), 1.44 (3H, t, J=7.0), 2.59 (3H, s), 2.63 (2H,
	i	s), 3.82 (3H, s), 4.10 (2H, q, J=7.0), 4.47 (2H, s),
		6.57-6.63 (2H, m), $6.82-6.87$ (1H, m).
I-129	58-60℃	1.04 (3H, t, $J=7.0$ ), 1.23 (6H, s), 2.00 (2H, sext, $J=7.0$ ),
		2.63 (3H, s), 2.67 (2H, s), 3.87 (3H, s), 4.10 (2H, t, J=7.0),
		4.50 (2H, s), $6.58-6.64$ (2H, m), $6.86-6.91$ (1H, m).
I-130		1.13 (6H, s), 1.45 (6H, t, J=7.4), 2.28 (3H, s), 2.62 (2H,
		s , 3.74 (2H, s), 4.08 (4H, q, J=7.4), 6.46-6.53 (2H, m),
		6.88-6.92 (1H, m).
F-131	91-93℃	1.04 (3H, t, J=7.0), 1.22 (6H, s), 1.76 (2H, sext, J=7.0),
		2.63 (3H, s), 2.65 (2H, s), 3.91 (2H, t, J=7.0), 4.50 (2H,
		s), $6.90$ (2H, d, $J=8.6$ ), $6.98$ (2H, d, $J=8.6$ ).
I-132	103-	1.04 (3H, t, $J = 7.0$ ), 1.22 (6H, s), 1.76 (2H, sext, $J = 7.0$ ),
	104℃	2.63 (3H, s), 2.65 (2H, s), 3.91 (2H, t, J=7.0), 4.50 (2H,
		s), 6.50 (1H, d, J=2.1), 6.60 (1H, d, J=7.4), 6.72 (1H, dd,
		J=7.4, 2.1), 7.28 (1H, d, J=7.4).
I-133	91-92℃	0.98 (3H, t, J=7.0), 1.23 (6H, s), 1.42-1.48 (2H, m),
		1.70-1.80 (2H, m), 2.63 (3H, s), 2.65 (2H, s), 3.96 (2H, t,
		J=7.0), 4.50 (2H, s), 6.90 (2H, d, J=8.6), 6.98 (2H, d,
T 101	00.0700	J=8.6).
I-134	86-87°C	0.98 (3H, t, J=7.0), 1.23 (6H, s), 1.42-1.48 (2H, m),
		1.70-1.80 (2H, m), 2.63 (3H, s), 2.65 (2H, s), 3.96 (2H, t,
		J=7.0), 4.50 (2H, s), 6.50 (1H, d, J=2.1), 6.60 (1H, d,
L		J=7.8), 6.72 (1H, dd, J=7.8, 2.1), 7.28 (1H, d, J=7.8).

表 2 8

化 合物 番		物性
号		
No	融点	NMR (CDCl <sub>8</sub> )
I-135	69-70°C	1.22 (6H, s), 1.47 (3H, t, J=7.0), 2.64 (3H, s), 2.66 (2H, s), 3.88 (3H, s), 4.15 (2H, q, J=7.0), 4.51 (2H, s), 6.61 (1H, d, J=8.2), 6.62 (1H, d, J=2.1), 6.88 (1H, d, J=8.2).
I-136	88-89°C	1.04 (3H, t, J=7.0), 1.23 (6H, s), 1.80 (2H, sext, J=7.0), 2.63 (3H, s), 2.67 (2H, s), 3.87 (3H, s), 3.90 (2H, t, J=7.0), 4.51 (2H, s), 6.61 (1H, dd, J=8.2, 2.1), 6.62 (1H, d, J=2.1), 6.88 (1H, d, J=8.2).
I-137	83-85℃	0.98 (3H, t, J=7.0), 1.23 (6H, s), 1.42-1.48 (2H, m), 1.70-1.80 (2H, m), 2.64 (3H, s), 2.68 (2H, s), 3.87 (3H, s), 4.03 (2H, t, J=7.0), 4.50 (2H, s), 6.59 (1H, d, J=8.2), 6.61 (1H, s), 6.88 (1H, d, J=8.2).
I-138	84-85℃	1.23 (6H, s), 1.34 (6H, d, J=6.1), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 4.53 (1H, sept, J=6.1), 6.89 (2H, d, J=8.6), 7.04 (2H, d, J=8.6).
I-139	92-93℃	1.23 (6H, s), 1.34 (6H, d, J=6.1), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 4.53 (1H, sept, J=6.1), 6.50 (1H, d, J=2.1), 6.60 (1H, d, J=8.0), 6.72 (1H, dd, J=8.0, 2.1), 7.28 (1H, d, J=8.0).
I-140	109- 110℃	1.22 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 7.04 (2H, d, J=7.5), 7.15 (1H, d, J=7.5), 7.32 (2H, t, J =7.5).
I-141	92-93℃	1.23 (6H, s), 2.63 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 7.01-7.08 (1H, m), 7.11-7.15 (3H, m).
I-142	133− 135℃	1.23 (6H, s), 2.63 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 7.03 (1H, dd, J=8.0, 2.1), 7.08 (1H, dd, J=8.0, 2.1), 7.25 (1H, t, J=8.0), 7.44 (1H, t, J=8.0).
I-143	92-93℃	1.23 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 4.50 (2H, s), 6.88 (1H, dd, J = 8.0, 2.1), 7.03 (1H, d, J=2.1), 7.15 (1H, dd, J=8.0, 2.1), 7.28(1H, t, J=8.0).
I-144	134- 135°C	1.22 (6H, s), 2.22 (3H,s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 7.00 (1H, d, J=8.1), 7.08 (1H, t, J=8.1), 7.15-7.25 (2H, m).
I-145	87-89°C	1.23 (6H, s), 2.37 (3H,s), 2.63 (3H, s), 2.66 (2H, s), 4.50 (2H, s), 6.82 (1H, d, J=8.1), 6.84 (1H, s), 6.98 (1H, d, J=8.1), 7.21 (1H, t, J=8.1).

表 2 9

化合	T .	物性
物番		NA 1ºP
号		
No	融点	NMR (CDCl <sub>8</sub> )
	11405 2113	
I-146	91-93℃	1.23 (6H, s), 2.35 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50
		(2H, s), 6.92 (2H, d, J=8.6), 7.15 (2H, d, J=8.6).
I-147	82-83℃	0.90 (3H, t, J=7.0), 1.22 (6H, s), 1.28-1.40 (2H, m),
		1.48-1.55 (2H, m), $2.55$ (2H, t, $J = 7.0$ ), $2.64$ (3H, s), $2.66$
		(2H, s), 4.50 (2H, s), 6.90 (1H, d, J=7.8), 7.09 (1H, t,
		J=7.8), 7.11 (1H, t, J=7.8), 7.28 (1H, d, J=7.8).
I-148	72-73°C	0.90 (3H, t, J=7.0), 1.22 (6H, s), 1.28-1.40 (2H, m),
		1.48-1.55 (2H, m), 2.60 (2H, t, J=7.0), 2.64 (3H, s), 2.66
		(2H, s), 4.50 (2H, s), 6.95 (2H, d, J=8.6), 7.18 (2H, d, J
		= 8.6).
I-149	133-	1.23 (6H, s), 1.35 (9H, s), 2.65 (3H, s), 2.69 (2H, s), 4.50
	134℃	(2H, s), 6.97 (1H, d, J=7.8), 7.13 (1H, t, J=7.8), 7.19 (1H,
		t, J=7.8), 7.41 (1H, d, J=7.8).
I-150	99-	1.22 (6H, s), 1.23 (3H, t, J=7.4), 2.62 (3H, s), 2.64 (2H,
	100℃	s), $2.66$ (2H, q, $J=7.4$ ), $4.50$ (2H, s), $6.95$ (2H, d, $J=8.6$ ),
		7.20 (2H, d, J=8.6).
I-151	40-42°C	1.23 (6H, s), 1.24 (3H, t, J=7.0), 2.64 (3H, s), 2.66 (2H,
		s), 2.67 (2H, q, J=7.0), 4.52 (2H, s), 6.83 (1H, d, J=8.1),
		6.86 (1H, s), 7.00 (1H, d, J=8.1), 7.28 (1H, t, J=8.1).
I-152	118-	1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 4.52 (2H, s),
	119℃	6.97-7.10 (4H, m).
I-153	89-90℃	1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 4.52 (2H, s),
		6.73-6.90 (3H, m), 7.25-7.30 (1H, m).
I-154	111-	1.22 (6H, s), 1.25 (6H, d, J=7.0), 2.62 (3H, s), 2.64 (2H,
	112℃	s), 2.91 (1H, sept, J=7.0), 4.50 (2H, s), 6.95 (2H, d,
		J=8.6), 7.25 (2H, d, J=8.6).
I-155	127-	1.23 (6H, s), 2.62 (3H, s), 2.64 (2H, s), 3.14-3.18 (4H, m),
	129℃	3.85-3.90 (4H, m), $4.50$ (2H, s), $6.93$ (2H, d, $J=8.6$ ), $7.04$
		(2H, d, J=8.6).
I-156	91-93℃	1.24 (6H, s), 2.62 (3H, s), 2.65 (3H, s), 2.68 (2H, s), 4.53
		(2H, s), 7.21-7.25 (1H, m), 7.48 (1H, t, J=7.9), 7.61 (1H,
		t, J=1.8), 7.74-7.78 (1H, m).

表 3 0

化 合物番号		物性
No	融点	NMR (CDCl <sub>3</sub> )
I-157	103.5- 104.5℃	1.23 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 4.50 (2H, s), 6.88-6.94 (2H, m), 7.46-7.51 (2H, m).
I-158	97-98℃	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.93-6.97 (1H, m), 7.19-7.31 (3H, m).
I-159	155.5- 156.5℃	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 6.98-7.05 (2H, m), 7.28-7.34 (1H, m), 7.59-7.63 (1H, m)
I-160	102- 106℃	1.23 (6H, s), 2.23 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.00 (3H, s), 4.52 (2H, s), 7.01-7.05 (1H, m), 7.28 (1H, t, J=1.8), 7.37 (1H, t, J=7.8), 7.45-7.49 (1H, m).
I-161	111- 112℃	1.23 (6H, s), 2.60 (3H, s), 2.65 (3H, s), 2.69 (2H, s), 4.53 (2H, s), 7.06-7.10 (2H, m), 7.97-8.03 (2H, m).
I-162	124- 125℃	1.23 (6H, s), 2.23 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.00 (3H, s), 4.52 (2H, s), 7.00-7.05 (2H, m), 7.65-7.70 (2H, m).
I-163	102- 103.5℃	1.23 (6H, s), 1.32 (6H, d, J=6.3), 2.63 (2H, s), 2.64 (3H, s), 4.52 (2H, s), 4.52 (1H, sept, J=6.3), 6.90-6.98 (3H, m), 7.04-7.13 (1H, m)
I-164	90-92°C	0.94 (3H, t, J=7.3), 1.23 (6H, s), 1.58 (2H, sext, J=7.3), 2.51-2.56 (2H, m), 2.65 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.90 (1H, dd, J=7.6, 1.3), 7.07-7.25 (3H, m)
I-165	157- 158℃	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.49 (2H, s), 7.08 (1H, d, J=7.9), 7.22 (1H, d, J=7.6), 7.50-7.56 (1H, m), 7.66-7.69 (1H, m)
I-166	145- 146℃	1.24 (6H, s), 2.64 (3H, s), 2.69 (2H, s), 4.51 (2H, s), 7.00-7.13 (7H, m), 7.30-7.37 (2H, m)
I-167	77-79℃	0.95 (3H, t, J=7.3), 1.23 (6H, s), 1.65 (2H, sext, J=7.3), 2.58 (2H, t, J=7.3), 2.63 (3H, s), 2.66 (2H, s), 4.51 (2H, s), 6.93-7.00 (2H, m), 7.14-7.20 (2H, m)

表 3 1

化 合		物性
物番		物は
号		
No	融点	NMR (CDCl <sub>3</sub> )
I-168	117-	1.23 (6H, s), 1.55 (9H, s), 2.63 (3H, s), 2.67 (2H, s), 4.52
T 100	118℃	(2H, s), 6.96-7.01 (2H, m), 7.37-7.42 (2H, m).
I-169	55-56°C	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.53 (2H, s), 7.19
T 170	00 0000	(1H, d, J=7.6), 7.26-7.27 (1H, m), 7.40-7.52 (2H, m).
I-170	88-90℃	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.53 (2H, s), 7.10
I-171	ļ	(2H, d, J=8.2), 7.63 (2H, d, J=8.2).
1-171	1	1.15 (6H, s), 1.18 (6H, d, J=6.9), 2.17 (3H, s), 2.31 (3H,
		s), 2.64 (2H, s), 3.11 (1H, sept, J=6.9), 3.78 (2H, s), 6.80
I-172		(1H, d, J=8.2), 7.11-7.18 (1H, m), 7.28-7.35 (1H, m).
1 112		1.15 (6H, s), 1.18 (6H, d, J=6.9), 2.15 (3H, s), 2.31 (3H, s), 2.65 (2H, g), 3.11 (1H, cent. J=6.9), 2.73 (2H, s), 2.65
		s), 2.65 (2H, s), 3.11 (1H, sept, J=6.9), 3.78 (2H, s), 6.99 (1H, s), 7.11-7.18 (1H, m), 7.28-7.35 (1H, s).
I-173	121-	1.22 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 3.89 (3H, s), 3.89
	123℃	(3H, s), 4.54 (2H, s), 6.96 (1H, d, J=8.6), 7.67 (1H, d,
		J=2.1), 7.87 (1H, dd, J=8.6, 2.1).
I-174	146-	1.24 (6H, s), 2.59 (2H, s), 2.65 (3H, s), 2.96-2.99 (4H,
	147℃	m), 3.76-3.79 (4H, m), 4.52 (2H, s), 6.98-7.17 (4H, m).
I-175	155-	1.23 (6H, s), 2.64 (3H, s), 2.66 (2H, s), 3.16-3.20 (4H,
	157℃	m), 3.84-3.88 (4H, m), 4.51 (2H, s), 6.54-6.57 (2H, m),
		6.70-6.74 (1H, m), 7.24-7.30 (1H, m).
I-176		1.22 (6H, d, J=6.6), 1.23 (6H, s), 1.38 (3H, t, J=7.1),
		2.65 (3H, s), 2.67 (2H, s), 3.08-3.18 (1H, m), 4.37 (2H,
		q, J=6.9), 4.52 (2H, s), 7.38 (1H, d, J=7.9), 7.59 (1H,
		d, J=2.0), 7.82 (1H, dd, J=8.1, 1.8).
I-177	120-	1.23 (6H, s), 1.50-1.61 (2H, m), 1.67-1.75 (4H, m), 2.62
	122℃	(3H, s), 2.66 (2H, s), 3.13-3.17 (4H, m), 4.50 (2H, s),
T 1570	104	6.92-7.02 (4H, m).
I-178	124-	1.23 (6H, s), 1.85-1.90 (4H, m), 2.62 (3H, s), 2.68 (2H,
	125℃	s), 3.22-3.27 (4H, m), 4.48 (2H, s), 6.74-6.80 (2H, m),
		6.95-6.98 (1H, m), $7.03-7.10$ (1H, m).

表 3 2

化合		物性
物番号		
No	融点	$NMR (CDCl_3)$
I-179		1.23 (6H, s), 2.50 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.51
		(2H, s), 6.78-6.82 (1H, m), 6.91 (1H, t, J=2.0), 7.03-7.07 (1H, m), 7.25-7.31 (1H, m).
I-180	102-	1.23 (6H, s), 2.49 (3H, s), 2.63 (3H, s), 2.67 (2H, s), 4.51
	103℃	(2H, s), 6.96-7.01 (2H, m), 7.27-7.31 (2H, m).
I-181	82-83°C	1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 4.52 (2H, s), 7.07 (1H, dd, J=7.6, 1.7), 7.14-7.20 (1H, m), 7.25-7.34 (2H, m).
I-182		1.23 (6H, s), 2.64 (3H, s), 2.69 (2H, s), 4.52 (2H, s), 6.90
		(1H, s), 6.93-7.04 (2H, m), 7.38 (1H, t, J=8.2)
I-183	68-70°C	1.24 (6H, s), 2.64 (3H, s), 2.69 (2H, s), 4.51 (2H, s),
		7.01-7.07 (2H, m), 7.21-7.24 (2H, m).
I-184	169-	1.25 (6H, s), 2.66 (3H, s), 2.70 (2H, s), 4.54 (2H, s),
	170°C	7.13-7.18 (2H, m), 7.34-7.39 (1H, m), 7.59-7.63 (2H, m),
		7.86-7.91 (1H, m), 8.58 (1H, dd, J=4.8, 1.6), 8.87 (1H, t,
		J=1.5)
I-185	92.5-	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.54 (2H, s),
	93.5℃	7.05-7.09 (1H, m), $7.24$ (1H, t, J=1.6), $7.34-7.40$ (2H, m),
		7.49 (1H, t, J=7.6), 7.87-7.92 (1H, m), 8.60 (1H, dd, J=4.9,
		1.4), 8.87 (1H, dd, J=2.3, 0.7)
I-186		1.09 (6H, s), 2.56 (3H, s), 2.58 (2H, s), 4.20 (2H, s),
		7.09-7.12 (1H, m), $7.24-7.30$ (2H, m), $7.36-7.45$ (2H, m),
		7.75-7.79 (1H, m), 8.54 (1H, dd, J=4.9, 1.6), 8.68 (1H, dd,
		J=2.3, 0.7)
I-187	110.5-	1.17 (6H, s), 2.51 (3H, s), 2.61 (2H, s), 4.33 (2H, s),
	111.5℃	6.93-7.19 (7H, m), 7.23-7.30 (2H, m)
I-188	75-76°C	1.14 (6H, s), 1.43 (6H, t, J=7.4), 2.61 (2H, s),
		3.65 (2H, s), 3.84 (3H, s), 4.08 (4H, q, J=7.4),
		6.46 (1H, dd, J=8.1, 2.2), 6.52 (1H, d, J=2.2),
		6.84 (1H, d, J=8.4).
I-189		1.19 (6H, s), 2.61 (2H, s), 3.65 (2H, s), 3.85 (3H, s), 3.88
		(3H, s), 6.85-6.99 (3H, m), 7.02-7.15 (1H, m).

表 3 3

化 合物 番号		物性
No	融点	NMR (CDCl₃) .
I-190		1.13 (6H, s), 1.23 (3H, t, J=7.4), 2.62 (2H, s), 2.66 (2H, q, J=7.4), 3.64 (2H, s), 3.84 (3H, s), 6.84 (2H, d, J=8.6), 7.16 (2H, d, J=8.6).
I-191	45-47°C	1.14 (6H, s), 1.25 (6H, d, J = 7.0), 2.62 (2H, s), 2.91 (1H, sept, J=7.0), 3.64 (2H, s), 3.84 (3H, s), 6.86 (2H, d, J=8.6), 7.19 (2H, d, J=8.6).
I-192	93-95℃	1.15 (6H, s), 2.31 (3H, s), 2.62 (2H, s), 3.80 (2H, s), 3.85 (3H, s), 6.85-6.99 (3H, m), 7.02-7.15 (1H, m).
I-193	65-67°C	1.13 (6H, s), 1.23 (3H, t, J=7.4), 2.31 (3H, s), 2.62 (2H, s), 2.65 (2H, q, J=7.4), 3.77 (2H, s), 6.90 (2H, d, J=8.3), 7.21 (2H, d, J=8.3).
I-194	95-97°C	1.15 (6H, s), 1.24 (6H, d, J=7.0), 2.31 (3H, s), 2.64 (2H, s), 2.91 (1H, sept, J=7.0), 3.77 (2H, s), 6.90 (2H, d, J=8.6), 7.21 (2H, d, J=8.6).
I-195	94-96°C	1.15 (6H, s), 1.41 (3H, t, J=7.0), 2.31 (3H, s), 2.64 (2H, s), 3.77 (2H, s), 4.05 (2H, q, J=7.4), 6.90-6.99 (4H, m).
I-196	99- 100°C	1.15 (6H, s), 1.47 (3H, t, J=7.0), 2.32 (3H, s), 2.66 (2H, s), 3.77 (2H, s), 3.88 (3H, s), 4.08 (2H, q, J=7.0), 6.52 (1H, d, J= 8.2), 6.56 (1H, d, J=2.1), 6.88 (1H, d, J=8.2).
I-197	133- 134℃	1.23 (6H, s), 1.50-1.75 (6H, m), 2.63 (3H, s), 2.65 (2H, s), 3.18 (4H, t, J=5.4), 4.51 (2H, s), 6.47-6.57 (2H, m), 6.72-6.76 (1H, m), 7.21 (1H, d, J=8.1)
I-198	124- 125℃	1.17 (6H, t, J=6.9), 1.23 (6H, s), 2.61 (3H, s), 2.68 (2H, s), 3.35 (4H, q, J=6.9), 4.49 (2H, s), 6.68 (2H, d, J=8.9), 7.04 (2H, d, J=8.9)
I-199	85-87°C	1.22 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 3.89 (3H, s), 3.92 (3H, s), 4.54 (2H, s), 7.01 (1H, d, J=7.9), 7.62 (1H, d, J=1.3), 7.67 (1H, dd, J=7.9, 1.7)
I-200	137- 138℃	1.23 (6H, s), 2.11-2.22 (2H, m), 2.62 (2H, t, J=7.9), 2.64 (3H, s), 2.67 (2H, s), 3.88 (2H, t, J=7.1), 4.52 (2H, s), 6.81-6.84 (1H, m), 7.30-7.50 (3H, m)

表 3 4

化 合物 番号		物性
No	融点	NMR (CDCl <sub>3</sub> )
I-201	86.5- 87.5℃	1.22 (6H, s), 2.62 (3H, s), 2.67 (2H, s), 4.50 (2H, s), 6.71 (1H, t, J=2.0), 6.76-6.82 (2H, m), 7.02-7.13 (3H, m), 7.29-7.37 (3H, m)
I-202	162− 163°C	1.25 (6H, s), 2.65 (3H, s), 2.70 (2H, s), 4.54 (2H, s), 7.10-7.14 (2H, m), 7.33-7.46 (3H, m), 7.59-7.63 (4H, m)
I-203	56.5- 57.5℃	1.06 (6H, s), 2.51 (3H, s), 2.59 (2H, s), 4.14 (2H, s), 7.07 (1H, dd, J=8.2, 1.3), 7.21-7.45 (8H, m)
I-204	97-99℃	1.24 (6H, s), 2.65 (3H, s), 2.68 (2H, s), 4.54 (2H, s), 7.00-7.04 (1H, m), 7.25-7.26 (1H, m), 7.33-7.48 (5H, m), 7.60-7.63 (2H, m)
I-205	95-96℃	1.21 (6H, s), 1.21 (6H, d, J=6.9), 2.61 (2H, s), 4.13(3H, s), 4.16 (2H, s), 6.77-6.81 (1H, m), 7.13-7.16 (2H, m), 7.29-7.33 (1H, m)
I-206	128- 129℃	1.18 (6H, d, J=6.9), 1.22 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 2.96-3.06 (1H, m), 4.48 (2H, s), 6.67 (1H, d, J=8.2), 7.47 (1H, dd, J=8.2, 1.7), 7.59 (1H, d, J=2.0)
I-207	149- 150℃	1.23 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 3.71 (8H, m), 3.86 (3H, s), 4.53 (2H, s), 6.95-7.05 (3H, m)
I-208	124- 126℃	1.23 (6H, s), 2.61 (3H, s), 2.67 (2H, s), 2.96 (6H, s), 4.50 (2H, s), 6.74 (2H, d, J=8.2), 7.04 (2H, d, J=8.2).
I-209	107- 109℃	1.23 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 2.96 (6H, s), 4.51 (2H, s), 6.34 (1H, d, J=2.0), 6.38 (1H, d, J=8.0), 6.54 (1H, dd, J=8.0, 2.0), 7.24 (2H, d, J=8.0).
I-210	98-99℃	1.06 (3H, t, J=7.4), 1.23 (6H, s), 2.63 (5H, s), 2.65 (3H, s), 2.99 (2H, q, J=7.4), 4.51 (2H, s), 6.98-7.10 (3H, m), 7.15-7.20 (1H, m).
I-211	94-96℃	0.84 (3H, t, $J = 7.4$ ), 1.22 (6H, s), 1.49 (2H, sext, $J = 7.3$ ), 2.63 (3H, s), 2.65 (2H, s), 2.72 (3H, s), 2.84 (2H, t, $J = 7.4$ ), 4.51 (2H, s), 6.90-7.05 (3H, m), 7.10-7.15 (1H, m).

表 3 5

化合		物性
物 番		
号		
No	融点	$NMR (CDCl_3)$
I-212	98-99℃	1.02 (6H, t, J=7.4), 1.22 (6H, s), 2.61 (2H, s), 2.63 (3H,
		s), 3.06 (4H, q, J=7.4), 4.51 (2H, s), 6.98-7.10 (4H, m).
I-213	83-84℃	1.23 (6H, s), 2.64 (3H, s), 2.71 (2H, s), 4.57 (2H, s),
		6.90-7.12 (3H, m)
I-214		1.19 (6H, d, J=6.9), 1.23 (6H, s), 2.64 (3H, s), 2.67 (2H,
		s), 3.06 (1H, sept, J=6.9), 4.49 (2H, s), 6.85 (1H, d,
T 015	00 050	J=8.2), 7.14 (1H, dd, J=8.2, 2.3), 7.27 (1H, d, J=2.3)
I-215	83-85℃	1.23 (6H, s), 2.32 (3H, s), 2.63 (3H, s), 2.66 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.75-6.80 (1H, m), 6.98 (1H, s),
I-216	99-	6.97-7.00 (1H, m). 1.23 (6H, s), 2.33 (3H, s), 2.62 (3H, s), 2.65 (2H, s), 2.70
1-210	100°C	(6H, s), 4.50 (2H, s), 6.78 (2H, t, J=7.9),
-	100 C	6.91 (1H, d , J=7.9).
I-217	98-99°C	1.23 (6H, s), 2.30 (3H, s), 2.63 (3H, s), 2.64 (2H, s), 2.67
1 411	30 33 0	(6H, s), 4.50 (2H, s), 6.81 (1H, s), 6.92 (2H, s).
I-218	117-	1.23 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 2.68 (6H, s), 4.50
1 210	19°C	(2H, s), 6.89 (1H, d, J=8.5), 6.99 (1H, d, J=2.0), 7.04
		(1H, dd, J=7.9, 2.0).
I-219	68-70°C	1.22 (6H, s), 2.22 (6H, s), 2.64 (3H, s), 2.66 (2H, s), 4.54
		(2H, s), 6.93-6.98 (1H, m), 7.04 (2H, d, J=8.0).
I-220	97-99℃	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.64 (2H, s),
		2.72 (6H, s), 3.25 (2H, q, J=7.4), 4.47 (2H, s),
	1	6.94-7.05 (3H, m), 7.15-7.20 (1H, m).
I-221	118-	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.64 (2H, s), 2.95 (6H,
	119℃	s), 3.25 (2H, q, J=7.4), 4.47 (2H, s), 6.34 (1H, d, J=7.5),
		6.38 (1H, s), 6.52 (1H, d, J=7.5, ), 7.24 (1H, t, J=7.5).
I-222	74-76°C	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.33 (3H, s), 2.63 (2H,
		s), 2.70 (6H, s), 3.25 (2H, q, J=7.4), 4.47 (2H, s), 6.78 (1H,
		d, J=7.5), 6.82 (1H, s), 6.91 (1H, t, J=7.5).

表 3 6

化合		物性
物番		,,, <u> </u>
号		
No	融点	NMR (CDCl <sub>3</sub> )
I-223		1.22 (6H, s), 1.25 (6H, d, J=7.0), 1.34 (3H, t, J=7.4), 2.65
ļ		(2H, s), 2.91 (1H, sept, J=7.0), 3.25 (2H, q, J=7.4), 4.50
		(2H, s), 6.98 $(2H, d, J=8.2)$ , 7.28 $(2H, d, J=8.2)$ .
I-224		1.21 (6H, s), 2.62 (3H, s), 2.66 (2H, s), 2.97 (3H, d,
		J=4.9), 3.84 (3H, s), 4.51 (2H, s), 6.66 (1H, brs), 6.96
7 005	60 7100	(1H, d, J=7.9), 7.30-7.33 (1H, m), 7.49 (1H, d, J=1.3)
I-225	69-71℃	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.52 (2H, s), 6.49
I-226		(1H, t, J=74.6), 7.04-7.26 (4H, m) 1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.50
1-220		(1H, t, J=74.2), 7.00-7.05 (2H, s),
		7.11-7.16 (2H, m)
I-227	81-83℃	1.17 (6H, t, J=7.0), 1.23 (6H, s), 2.63 (3H, s),
		2.66 (2H, s), 3.35 (4H, q, J=7.0), 4.52 (2H, s),
		6.29 (1H, s), 6.30 (1H, d,t, J=8.2,2.3),
		6.49 (1H, dd, J=8.2, 2.3), 7.19 (1H, t, J=8.2).
I-228	106-	1.21 (6H, s), 2.61 (3H, s), 2.64 (2H, s), 2.70 (6H, s), 4.47
	107°C	(2H, s), 6.90 (2H, s), 6.93 (1H, s).
I-229	121-	1.23 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 4.48
	122°C	(2H, s), 6.50-6.70 (2H, m),6.93 (1H, dd, J=8.5, 6.2).
I-230	85-86℃	1.21 (6H, s), 2.63 (3H, s), 2.64 (2H, s), 2.66 (6H, s), 4.49
		(2H, s), 6.74-6.79 $(2H, m), 6.93-6.98$ $(1H, m).$
I-231	82-84°C	1.23 (6H, s), 1.25 (3H, t, J=7.6), 2.62 (3H, s), 2.66 (2H,
		s), 2.67 (2H, q, J=7.6), 2.71 (6H, s), 4.50 (2H, s), 6.80
		(1H, d, J=7.6), 6.84 (1H, s), 6.93 (1H, d, J=7.6).
I-232	75-76℃	1.22 (3H, t, J=7.6), 1.23 (6H, s), 2.60 (2H, q, J=7.6), 2.63
		(3H, s), 2.64 (2H, s), 2.68 (6H, s), 4.50 (2H, s), 6.83 (1H,
T 999	06 000	s), 6.93 (2H, s).
I-233	86-88℃	1.22 (6H, s), 1.33 (3H, t, J=7.4), 2.64 (2H, s), 2.71 (6H,
		s), 3.24 (2H, q, J=7.4), 4.47 (2H, s), 6.92 (2H, s), 6.94(1H,
L		s).

表 3 7

化合		物性
物番号		
No	融点	NMR (CDCl <sub>3</sub> )
I-234	70-71°C	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.64 (2H, s), 2.71 (6H,
		s), 3.25 (2H, q, J=7.4), 4.46 (2H, s), 6.60-6.68 (2H, m),
I-235	80-82°C	6.92-6.94(1H, m). 1.22 (6H, s), 1.24 (3H, t, J=7.6), 1.33 (3H, t, J=7.4), 2.60
1 200	00 02 0	(2H, q, J=7.6), 2.61 (2H, s), 2.71 (6H, s), 3.24 (2H, q,
		J=7.4), 4.47 (2H, s), 6.81 (1H, d, J=7.6), 6.94(1H, s),
		6.94 (1H, d, J=7.6).
I-236		1.03 (3H, t, J=7.3), 1.20 (6H, d, J=6.9), 1.23 (6H, s), 1.40
		(3H, d, J=6.9), 1.61-1.89 (2H, m), 2.63 (2H, s), 3.15 (1H,
		sept, J=6.9), 3.95 (1H, q, J=6.9), 4.47 (2H, s), 6.89-6.92 (1H, m), 7.13-7.20 (2H, m), 7.31-7.34 (1H, m)
I-237		1.05 (6H, d, J=6.6), 1.21 (6H, d, J=6.6), 1.23 (6H, s),
		1.98-2.08 (1H, m), 2.64 (2H, s), 3.16 (1H, sept, J=6.6), 3.20
		(2H, d, J=6.6), 4.49 (2H, s), 6.88-6.92 (1H, m), 7.13-7.22
T 000	100	(2H, m), 7.30-7.35 (1H, m)
I-238	102- 104°C	1.20 (6H, d, J=6.9), 1.22 (6H, s), 2.61 (2H, s), 2.85-2.95 (1H, m), 3.19 (3H, d, J=4.6), 4.46 (2H, s), 6.73-6.79 (1H,
	1040	m), 7.14-7.20 (2H, m), 7.29-7.34 (1H, m), 12.40 (1H, brs)
I-239	58-60°C	1.23 (6H, s), 2.17 (3H, s), 2.64 (3H, s), 2.65 (2H, s),
		2.70 (6H, s), 4.52 (2H, s), 6.63 (1H, d, J=7.9), 6.87 (1H,
T 0.40	100	d , J=7.9), 7.14 (1H, d, J=7.9).
I-240	100- 101℃	1.23 (6H, s), 2.62 (3H, s), 2.64 (2H, s), 2.78 (6H, s), 3.89
	101 C	(3H, s), 4.52 (2H, s), 6.60-6.70 (2H, m), 6.94 (1H, d, J=7.9).
I-241	82-83℃	1.23 (6H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 2.70
		(6H, s), 4.52 (2H, s), 6.63 (1H, d,t, J=7.9,1.9),
		6.70 (1H, d, J=1.9), 7.14 (1H, d, J=7.9).
I-242	99-	1.23 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 2.81 (6H, s), 4.50
	100℃	(2H, s), 6.91 (1H, d,t, J=8.4,2.6), 7.06 (1H, d, J=8.4), 7.14 (1H, d, J=2.6).
I-243	63-64°C	1.23 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 2.78 (6H, s), 3.89
		(3H, s), 4.52 (2H, s), 6.67 (1H, s), 6.70 (1H, d, J=7.9),
		6.81 (1H, d , J=7.9).
I-244	68-70°C	0.88 (6H, t, J=7.5), 1.22 (6H, d, J=6.9), 1.35 (3H, t,
		J=7.4), 1.50-1.70 (4H, m), 2.61 (2H, s), 3.15 (1H, sept,
		J=6.9), 3.29 (2H, q, J=7.4), 4.44 (2H, s), 6.89-6.92 (1H,
L <u>.                                    </u>		m), $7.08-7.21$ (2H, m), $7.30-7.35$ (1H, m).

表 3 8

化 合		物性
物番号		
No	融点	NMR (CDCl <sub>3</sub> )
T 0.45	04 0000	1 14 (011 ) 1 00 (011 ] 1 0 0 0 0 (011 ) 0 00 (011
I-245	81-82°C	1.14 (6H, s), 1.20 (6H, d, J=6.9), 2.63 (2H, s), 3.06 (2H, s), 3.08 (1H, sept, J=6.9), 3.18 (3H, s), 6.74 (1H, dd,
		J=7.3, 1.7), 6.98-7.10 (2H, m), 7.20-7.24 (1H, m)
I-246	47-49°C	0.95 (3H, t, J=7.3), 1.13 (6H, s), 1.20 (6H, d, J=6.9),
		1.55-1.74 (2H, m), 2.62 (2H, s), 3.03-3.11 (3H, m),
		3.52-3.57 (2H, m), 6.73 (1H, dd, J=7.6, 1.7), 6.96-7.10 (2H, m), 7.21 (1H, dd, J=7.3, 1.7)
I-247	68-70°C	1.11 (6H, s), 1.18 (6H, d, J=6.9), 1.19 (6H, d, J=6.9), 2.56
		(2H, s), 2.89 (2H, s), 3.08 (1H, sept, J=6.9), 5.08 (1H,
		sept, J=6.9), 6.73 (1H, dd, J=7.9, 1.7), 6.99-7.10 (2H, m),
I-248		7.21 (1H, dd, J=7.9, 1.7) 0.97 (6H, d, J=6.9), 1.14 (6H, s), 1.18 (6H, d, J=6.9),
1-240		2.05-2.15 (1H, m), 2.62 (2H, s), 3.07 (2H, s), 3.08 (1H,
		sept, J=6.9), 3.44 (2H, d, J=7.6), 6.71(1H, dd, J=7.6, 1.7),
		6.96-7.09 (2H, m), 7.21 (1H, dd, J=7.6, 1.7)
I-249	96-97℃	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.59 (2H, s), 7.04
		(1H, d, J=7.3), 7.41-7.50 (3H, m), 7.67 (1H, d, J=7.3), 7.87 (1H, dd, J = 7.3, 2.1), 8.05 (1H, d, J=7.3, ).
I-250	108-	1.24 (6H, s), 2.67 (3H, s), 2.69 (2H, s), 4.59 (2H, s), 7.15
	109℃	(1H, d, J=7.3), 7.41 (1H, q, J=7.3), 7.69 (1H, t, J=8.4),
		7.91 (1H, d, J=7.3), 8.45 (1H, d, J=8.4),
I-251	105-	8.92-8.95 (1H, m). 1.22 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 3.97 (3H, s), 4.53
1 251	107℃	(2H, s), 6.87-6.90 (1H, m), $7.25-7.30$ (1H, m), $7.96-7.99$
		(1H, m).
I-252	132-	1.23 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 2.92 (3H, s),
	133℃	4.49 (2H, s), 6.73-6.78 (1H, m), 7.20-7.23 (1H, m),
I-253	118-	8.05-8.07 (1H, m) 1.23 (6H, s), 2.60 (3H, s), 2.63 (2H, s), 4.52 (2H, s), 7.30
	120°C	(2H, s), 8.12 (1H, s).
I-254	112-	1.23 (6H, s), 2.63 (3H, s), 2.69 (2H, s), 3.94 (3H, s), 4.51
	113℃	(2H, s), 6.76 (1H, d, $J = 8.1$ ), 7.35 (1H, dd, $J = 8.1$ , 2.1),
TOFF	109-	7.92 (1H, d, $J = 2.1$ ).
I-255	109- 110℃	1.23 (6H, s), 1.40 (3H, t, J=7.0), 2.62 (3H, s), 2.66 (2H, s), 4.38 (2H, q, J=7.0), 4.51 (2H, s), 6.75 (1H, d, J=8.1).
		7.35 (1H, dd, J=8.1, 2.1), 7.90 (1H, d, J=2.1).

表 3 9

		物性
No	融点	NMR (CDCl <sub>3</sub> )
I-256	75-76°C	1.03 (3H, t, J=7.6), 1.22 (6H, s), 1.76 (2H, sext, J= 7.6),
		2.63 (3H, s), 2.65 (2H, s), 4.24 (2H, t, J=7.6), 4.51 (2H, s), 6.76 (1H, d, J=8.1), 7.35 (1H, dd, J=8.1, 2.1), 7.92 (1H, d, J=2.1).
I-257	74-76°C	1.24 (6H, s), 1.36 (6H, d, J=6.3), 2.63 (3H, s), 2.70 (2H,
		s), 4.51 (2H, s), 5.28 (1H, sept, J=6.3), 6.70 (1H, d, J=8.1), 7.32 (1H, dd, J=8.1, 2.1), 7.92 (1H, d, J=2.1).
I-258	102− 104°C	1.23 (6H, s), 2.58 (3H, s), 2.63 (2H, s), 2.69 (3H, s), 4.51 (2H, s), 7.20-7.26 (2H, m), 8.21 (1H, d, J=2.1).
I-259	81-83°C	1.23 (6H, s), 1.38 (3H, t, J=7.3), 2.63 (3H, s), 2.63 (2H,
		s), 3.18 (2H, q, J=7.3), 4.51 (2H, s), 7.15-7.26 (2H, m), 8.21 (1H, d, J=2.1).
I-260	78-79°C	1.05 (3H, t, $J = 7.4$ ), 1.23 (6H, s), 1.75 (2H, sext, $J=7.3$ ),
		2.63 (3H, s), 2.65 (2H, s), 3.15 (2H, t, J=7.4), 4.51 (2H, s), 7.15-7.26 (2H, m), 8.20 (1H, d, J=2.1).
I-261	102-	1.23 (6H, s), 1.40 (6H, d, J=6.6), 2.63 (3H, s),
	103℃	2.66 (2H, s), 4.00 (1H, sept, J=6.6), 4.51 (2H, s), 7.15-7.26 (2H, m), 8.22 (1H, d, J=2.1).
I-262	109-	1.22 (6H, s), 2.61 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 3.80
	110°C	(3H, s), 4.48 (2H, s), 6.47 (1H, dd, J=7.9, 2.1), 6.56 (1H, d, J=2.1), 6.95 (1H, d, J=7.9).
I-263	99-	1.22 (6H, s), 2.62 (3H, s), 2.63 (2H, s), 2.64 (6H, s), 3.78
	100℃	(3H, s), 4.48 (2H, s), 6.59 (1H, d, J=2.1), 6.64 (1H, dd, J=7.9, 2.1), 6.98 (1H, d, J=7.9).
I-264	114-	0.98 (6H, t, J=7.0), 1.23 (6H, s), 2.16 (3H, s), 2.63 (3H,
	115℃	s), 2.64 (2H, s), 2.98 (4H, q, J=7.0), 4.52 (2H, s), 6.65 (1H, d, J=7.9), 6.89 (1H, d, J=7.9), 7.13 (1H, t, J=7.9).
I-265	66-67°C	0.98 (6H, t, J=7.0), 1.23 (6H, s), 2.16 (3H, s), 2.63 (3H,
		s), 2.64 (2H, s), 2.98 (4H, q, J=7.0), 4.52 (2H, s), 6.63 (1H, dd, J=7.9,2.1), 6.70 (1H, d, J=2.1),
		7.16  (1H, d, J = 7.9).
I-266	88-90°C	1.04 (6H, t, J=7.0), 1.24 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 3.17 (4H, q, J=7.0), 3.86 (3H, s), 4.51 (2H, s), 6.67
		(1H, s), 6.70 (1H, d, J=7.9), 6.85 (1H, d, J=7.9).

表 4 0

化 合物 番		物性
号		
No	融点	NMR (CDCl <sub>3</sub> )
I-267	138-	0.82-0.92 (9H, m), 1.18 (3H, d, J=6.9), 1.51-1.65 (6H, m),
	140℃	2.62 (2H, s), 2.65 (3H, s), 2.87 (1H, sept, J=6.9), 4.33 (1H,
		d, J=13.5), 4.59 (1H, d, J=13.5), 6.89-6.92 (1H, m),
		7.13-7.28 (3H, m)
I-268	161-	0.89-0.95 (6H, m), 1.21 (6H, d, J=6.9), 1.25-1.54 (8H, m),
-	163℃	2.62 (2H, s), 2.65 (3H, s), 3.10 (1H, sept, J=6.9), 4.47 (2H,
		s), 6.88-6.92 (1H, m), 7.14-7.18 (2H, m), 7.31-7.34 (1H, m)
I-269		1.21 (6H, d, J=6.9), 1.65-1.88 (8H, m), 2.64 (3H, s), 2.75
		(2H, s), 3.09 (1H, sept, J=6.9), 4.57 (2H, s), 6.90-6.94 (1H,
		m), 7.13-7.20 (2H, m), 7.30-7.35 (1H, m)
I-270		1.21 (6H, d, J=6.9), 1.37-1.54 (8H, m), 1.76-1.80 (2H, m),
		2.65 (3H, s), 2.67 (2H, s), 3.09 (1H, sept, J=6.9), 4.54 (2H,
		s), 6.89 (1H, m), 7.11-7.21 (2H, m), 7.29-7.34 (1H, m)